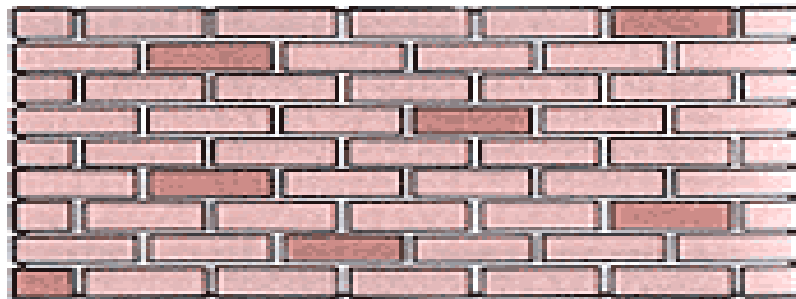


Masonry

Masonry : The overlapping of the bricks or stones on the diffinate manner is called as masonry . The normal types of bonds are given in the refrence books nut here we describe the bond which used at specific condition . The link of refreance book is given at end of this file

Running Block :

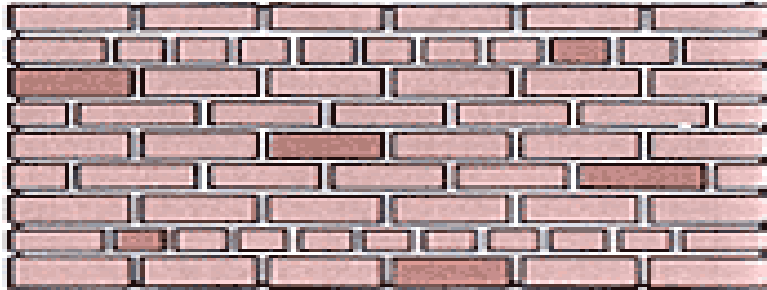


Running Bond

This is the simplest pattern; it consists of only stretchers. Reinforcing ties are usually used with it because of the absence of headers. Running bond is common in brick veneer walls and wall cavity construction.

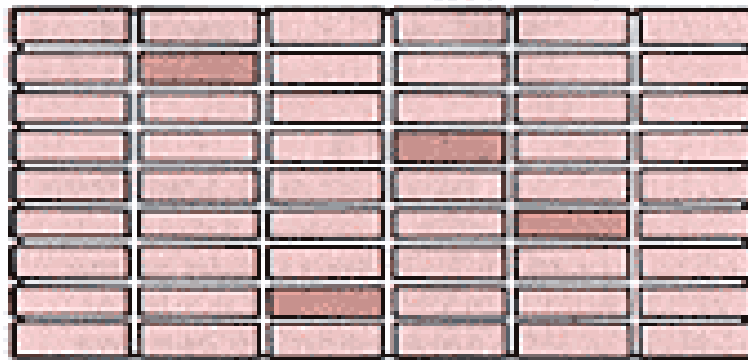
Common or American Bond : As detailed in the step-by-step instruction, this is a variation of the running bond, with a course of full-length headers placed at regular intervals for structure bonding.

Masonry



Common Bond

Stack or Block Bond: This is a weak bond, used normally for decorative effect on veneers. All vertical joints are aligned, and steel reinforcing ties must be installed if the pattern is being used structurally.



Stack Bond

Masonry

Replacement of Brick:

Moisture may penetrate brick that are broken or heavily spalled. When this occurs, it may be necessary to replace the affected units. The procedure shown in Figure 2 is suggested for removing and replacing brick. The mortar that surrounds the affected units should be cut out carefully to avoid damaging adjacent brickwork, as shown in Figure 2b. For ease of removal, the brick to be removed can be broken. Once the units are removed, all of the surrounding mortar should be carefully chiseled out, and all dust and debris should be swept out with a brush. If the units are located in the exterior wythe of a drainage wall, care must be exercised to prevent debris from falling into the air space, which could block weeps and interfere with moisture drainage. The brick surfaces in the wall should be dampened before new units are placed, but the masonry should absorb all surface moisture to ensure a good bond. The appropriate surfaces of the surrounding brickwork and the replacement brick should be buttered with mortar. The replacement brick should be centered in the opening and pressed into position, refer to Figure 2c. The excess mortar should be removed with a trowel. Pointing around the replacement brick will help to ensure full head and bed joints. When the mortar becomes “thumbprint” hard, the joints should be tooled to match the original profile. Mortar proportions are selected as discussed in the section on Repointing. Matching the existing mortar color is important to keep the replacement location from being different in appearance. Similarly, replacement brick must match the color, texture and size of the existing brick. Locating a matching brick may take considerable effort.

Masonry

Installation of Flashing

Flashing that has been omitted, damaged or improperly installed may permit moisture to penetrate to the building interior. If this is the case, a difficult procedure of removing brick, installing flashing and replacing the units may be required. To install continuous flashing in existing walls, alternate sections of masonry in 2 to 5 ft (610 mm to 1.52 m) lengths should be removed. The flashing is installed in these sections and the masonry replaced, refer to Photo 3. Alternately, temporary braces can be installed as longer sections of brickwork are removed, as shown in Photo 4. The flashing can then be placed in these sections. The lengths of flashing should be lapped a minimum of 6 in. (152 mm) and be completely sealed to function properly. See *Technical Note 7* for other flashing installation recommendations. The opening is then filled as discussed under Replacement of Brick. The replaced masonry should be properly cured (5 to 7 days) before the intermediate masonry sections or supports are removed.

Coatings and Water Repellents

The use of external coatings on brick masonry should be considered only after completing repair and replacement of brick, mortar joints and other building elements, and careful consideration of the possible consequences. Properly designed and constructed brickwork can be expected to satisfactorily resist water penetration without the application of water repellents or external coatings. However, they may be used successfully to correct some deficiencies.

For example, some coatings are helpful in reducing the amount of water absorbed by barrier walls and masonry subject to extreme exposures such as chimneys, parapets, copings and sills. External coatings are most effective in reducing water penetration when their intended use corresponds with the nature of the existing water penetration problem. Water repellents and coatings should not be considered equivalent

Masonry

to essential, code-required details that resist water penetration. Use of coatings for reasons outside their intended application rarely reduces water penetration and may lead to more serious problems.

Only water repellents that permit evaporation and the passage of water vapor, such as siloxanes and silanes, should be used on exterior brickwork. Film-forming coating should not be applied to exterior brickwork.

Reference : **Brick Construction's technical notes**
Brick Industries Association.

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