Brick Masonry

This bond is weak in strength but it is economical. Brick masonry is made up of brick units bonded together with mortar.

Components of brick masonry

- Brick
- Mortar

Types of mortar

- Cement mortar
- Lime mortar
- Cement-lime mortar
- Lime surkhi mortar
- Mud mortar

Types of bricks

- Traditional bricks
- Modular bricks

Traditional bricks
It has not been standardize in size.

Dimensions varies from place to place

Thickness varies from varies from cm to 7.5cm, width varies from 10 to 13 cm and length varies from 20 to 25 cm.

Modular brick

Any brick which is the same uniform size as laid down by bis.

The nominal size of the modular brick is 20cm x 10cm x 10cm.

Actual size is 19x9x9

Classes of brick

- First class brick
- Second class brick
- Third class brick
Bonds in brick work

- Stretcher bond
- Header bond
- English bond
- Flemish bond
- Facing bond
- English crossing bond
- Brick on edge bond
- Dutch bond
- Racking bond
- Zigzag bond
- Garden wall bond

**Stretcher bond**

The length of the brick is along with the face of the wall.

This pattern is used only for those walls which have thickness of half a brick.

**Header bond**

The width of the bricks are thus along the direction of the wall.

This pattern is used only when the thickness of the wall is equal to one brick.

**English bond**

It is the most commonly used method; this bond is considered to be the strongest.

This bond consists of alternate courses of stretchers and headers.

Alternative courses will show either headers or stretchers in elevation.

There is no vertical joint.

Every alternative header comes centrally over the joint between two stretchers in course in below.

Since the number of vertical joint in the header course twice the number of vertical joints in stretcher course, the joints in the header course are made thinner than the joints in the stretcher course.
Flemish bond

In this type of course is comprised of alternative headers and stretchers

**Types of Flemish bond**

Double Flemish bond  
Single Flemish bond

**Double Flemish bond**

Every course consists of headers and stretchers placed alternatively

The facing and backing of the wall in each course have the same appearance

**Single Flemish bond**

Single Flemish bond is comprised of double Flemish bond facing an English bond backing and hearting in each course

**Facing bond**

This bond is used where the bricks of different thickness are to be used in the facing and backing of the wall

The nominal thickness of facing brick is 10 cm and that of backing bricks is 9 cm the header course is provided at a vertical interval of 90 cm

**English cross bond**

This is the modification of English bond to improve the appearance of the wall

Brick on edge bond

Source: [http://www.nprcet.org/e%20content/Misc/e-Learning/CIVIL/VI%20SEMESTER/10111CE601%20-%20CONSTRUCTION%20TECHNIQUES%20EQUIPMENTS%20AND%20PRACTICE.pdf](http://www.nprcet.org/e%20content/Misc/e-Learning/CIVIL/VI%20SEMESTER/10111CE601%20-%20CONSTRUCTION%20TECHNIQUES%20EQUIPMENTS%20AND%20PRACTICE.pdf)