

Building Construction Technology II

(Wall Finishes)

Department of Architectural Engineering/2nd stage

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SURFACE FINISHES

- ❑ The art of treating the surface of building materials with a suitable covering material to make them weather resisting and decorative is called **SURFACE FINISHING.**



- The covering material used for surface finishing are called **SURFACE FINISHES** which are plasters, paints, washes etc.



PURPOSE

- ❑ To protect the surface from the effects of weathering agencies.
- ❑ To provide a smooth surface.
- ❑ To provide pleasing appearance to the surface.



CLADDING

CLADDING is the application of one material over another to provide skin or layer intended to control the infiltration of weather elements, or for aesthetic purposes.

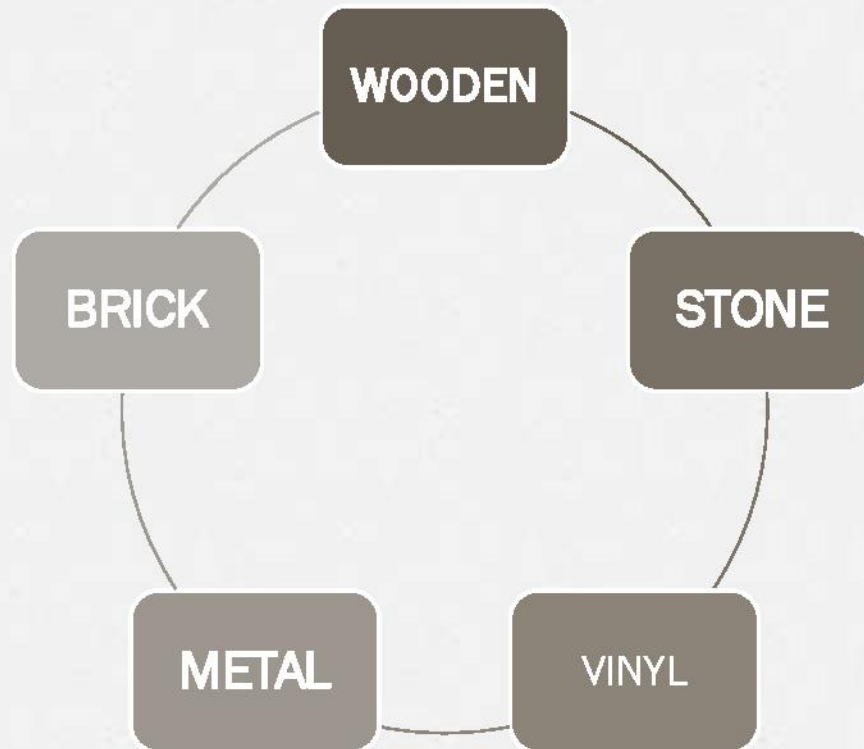


PURPOSE

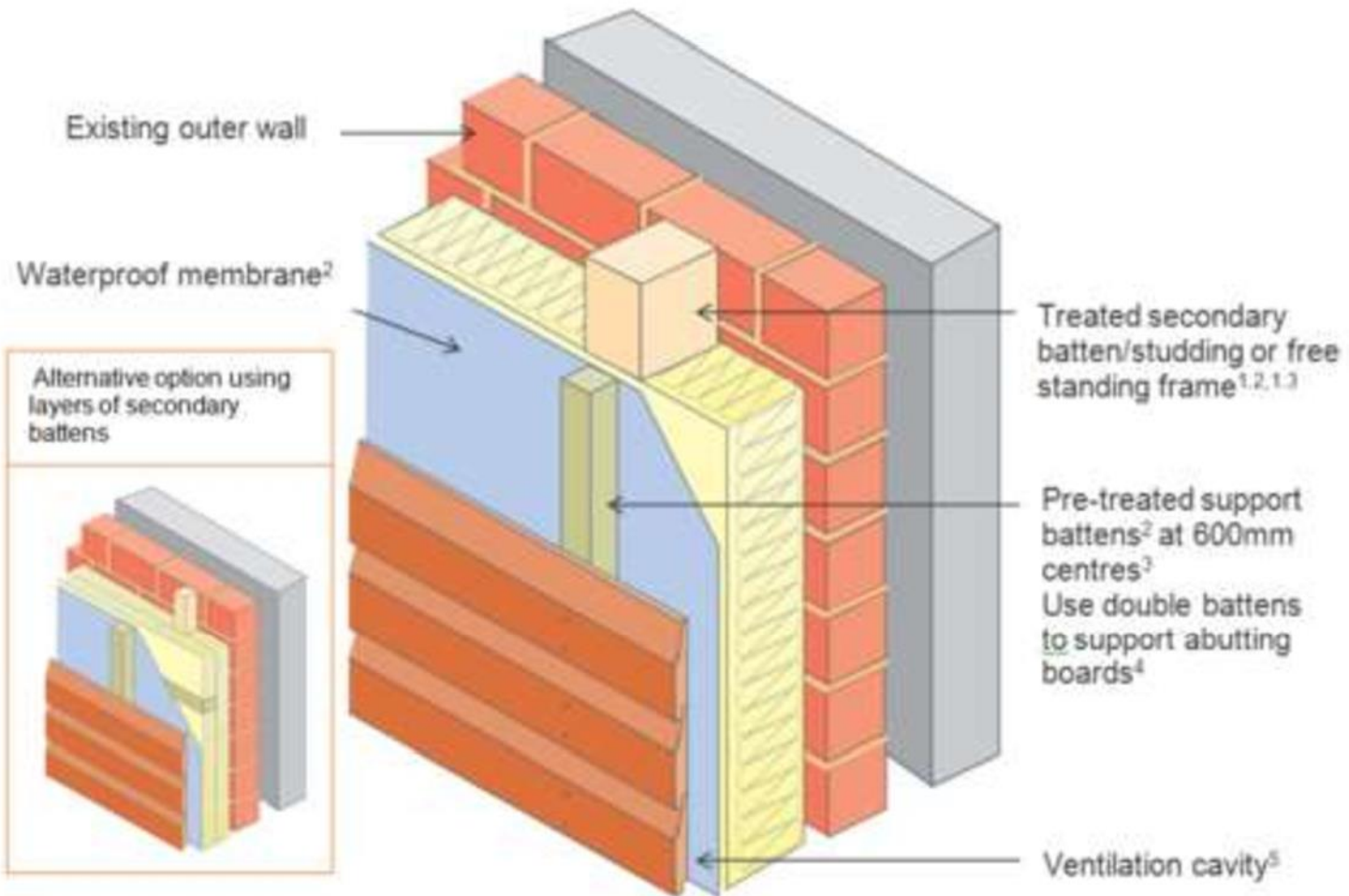
- ❑ To alter the appearance of the property
- ❑ To provide additional weatherproofing & ventilation
- ❑ To match new parts of the building to old
- ❑ For interior design and acoustic purpose.
- ❑ To disguise external wall insulation



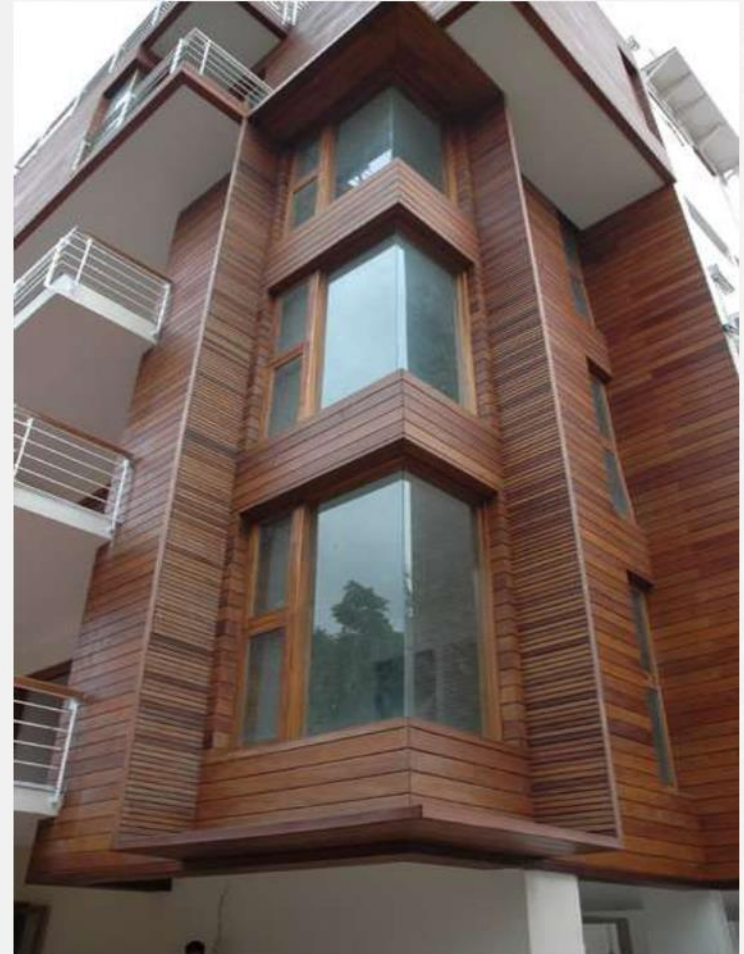
TYPES OF CLADDING



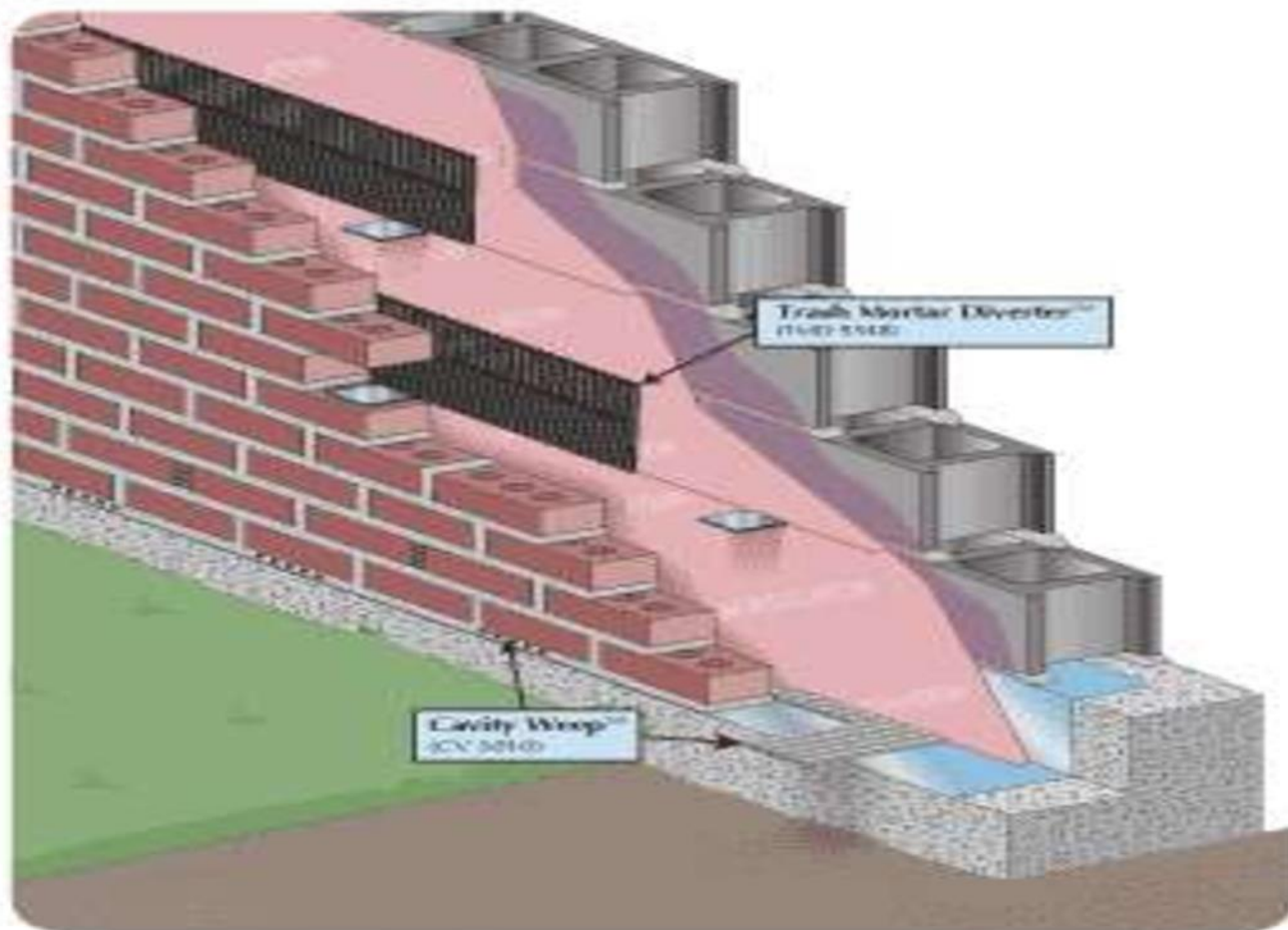
WOODEN CLADDING



APPLICATIONS OF WOODEN CLADDING



BRICK CLADDING



APPLICATIONS OF BRICK CLADDING



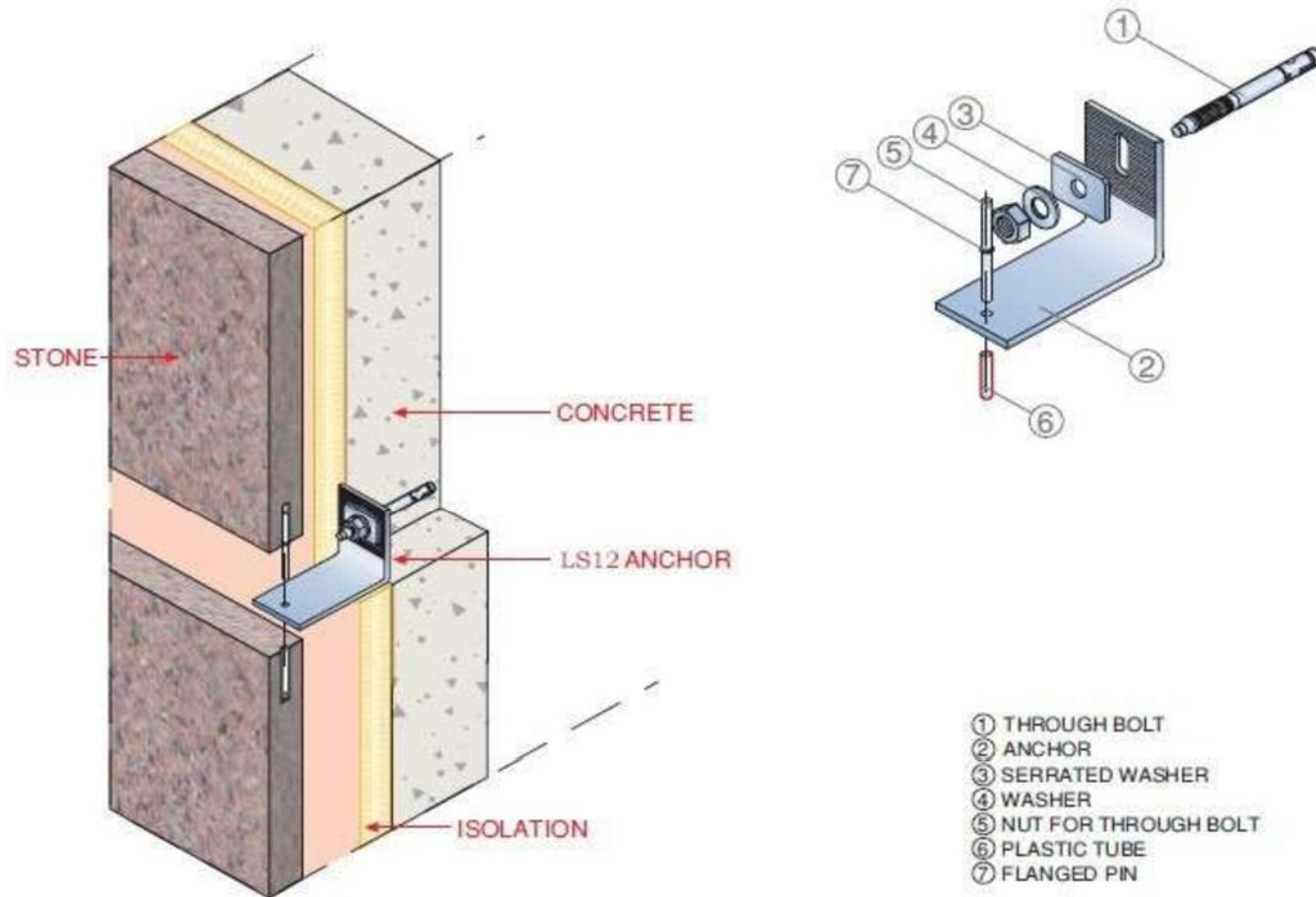
METAL CLADDING



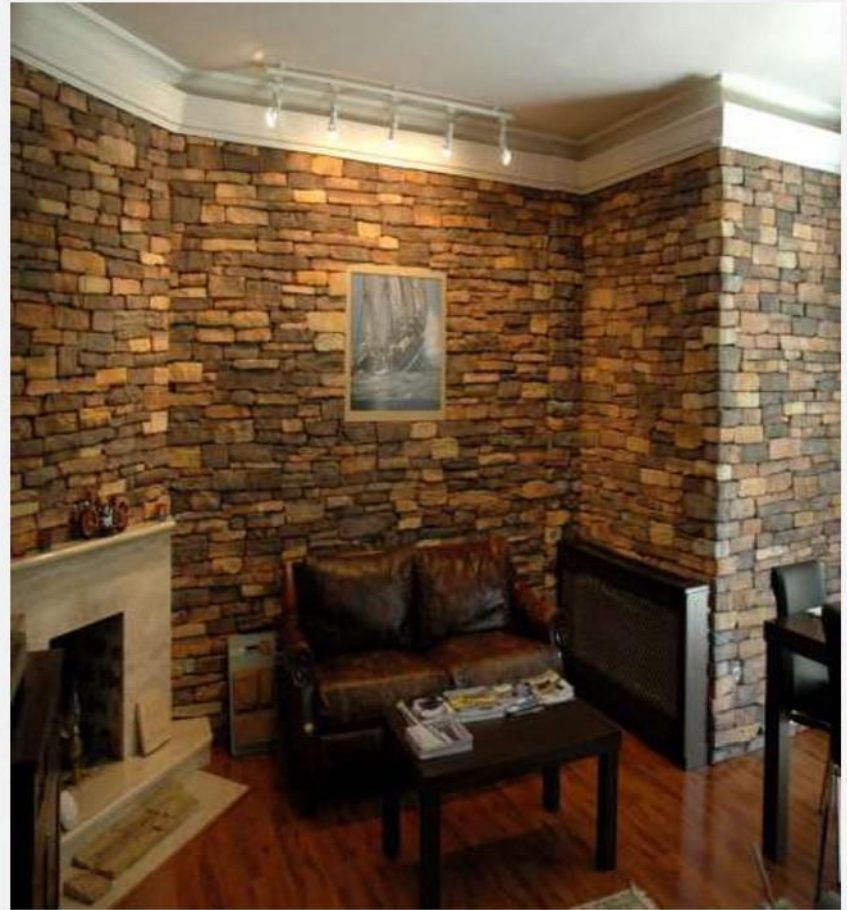
VINYL CLADDING



STONE CLADDING



APPLICATIONS OF STONE CLADDING



ADVANTAGES OF CLADDING

- ☐ Low maintenance
- ☐ Durability & long-lasting resilience
- ☐ Safety & protection
- ☐ Reduces water absorption
- ☐ Resistance to sunlight, air, sound & chemical pollution
- ☐ Aesthetic value



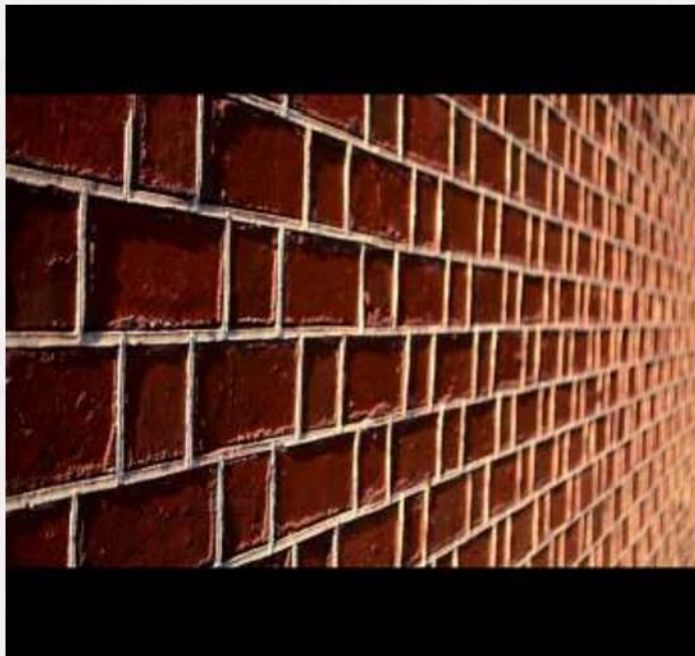
DISADVANTAGES

- ☐ Cost
- ☐ Time
- ☐ Repair



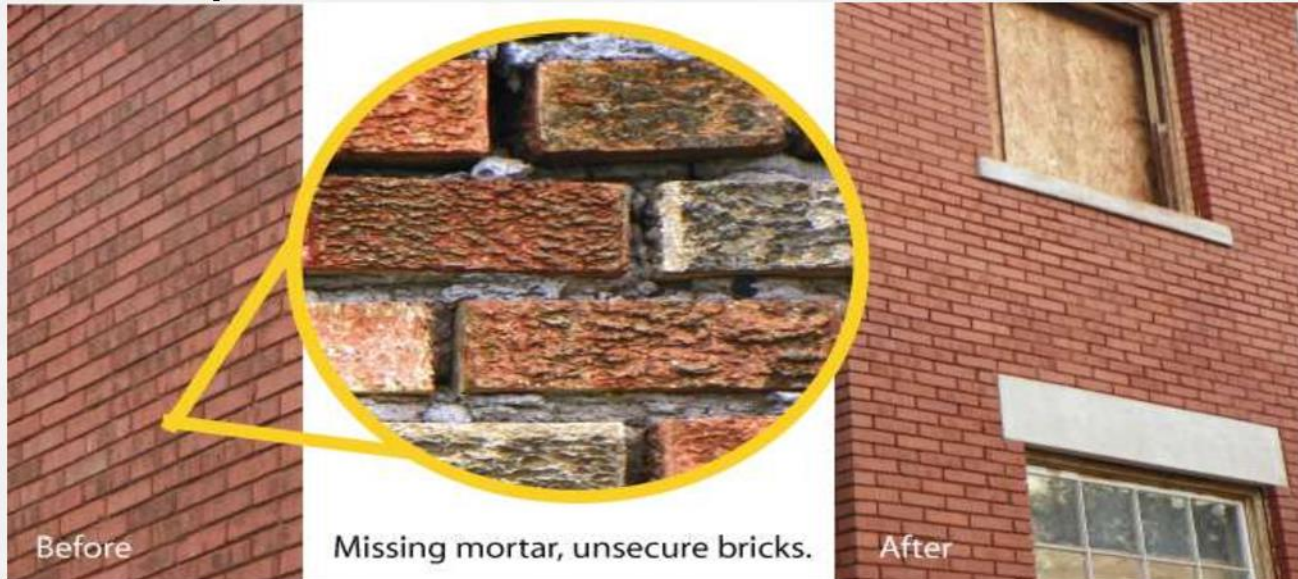
POINTING

Pointing is raking out joints in brick work or in stone masonry to depth about 13mm and filling the same with mortar of slightly richer mix.



PURPOSE

This treatment not only protects the joint from the adverse effect of atmosphere but also magnifies the appearance of the surface by exhibiting the pattern of the joints, their thickness, colours and texture prominently.



MORTAR FOR POINTING

- ❑ Pointing may be done by using lime or cement mortar.
- ❑ The mortar for lime pointing is made by taking equal part of fat lime and fine sand and then grinding the mixture thoroughly, in mortar mill.
- ❑ The mortar for cement pointing is made by mixing cement and sand in proportion of 1:2 or 1:3.



TYPES OF POINTING

CUT/WEATHERED/STRUCK POINTING

V GROOVED POINTING

KEYEED/GROOVED
POINTING

FLUSH
POINTING

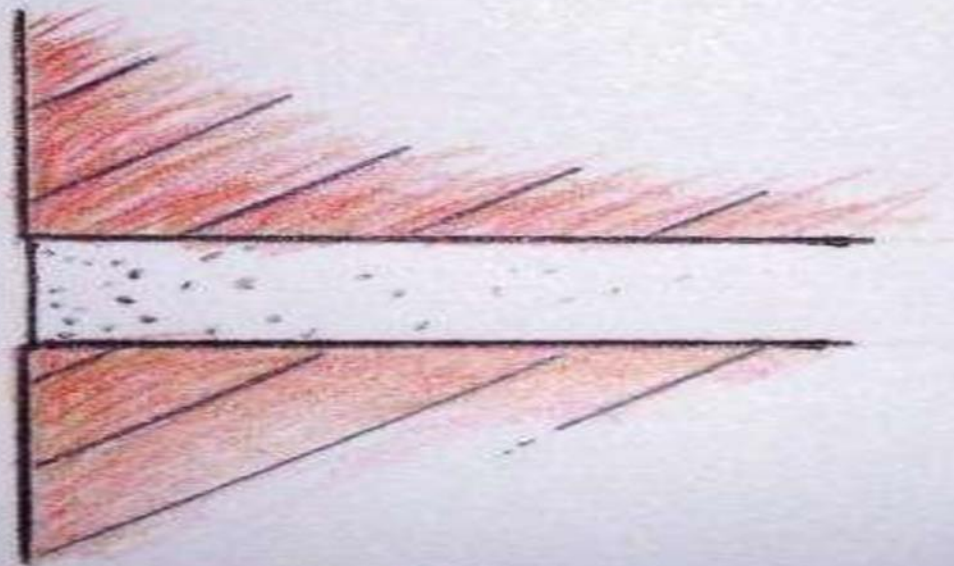
TUCK
POINTING

BEADED
POINTING

FLUSH POINTING

The mortar is pressed into the raked joints and finished off flush with the edges of the bricks or stones, so as to give a smooth appearance. The edges are then neatly trimmed with a trowel and straight edge.

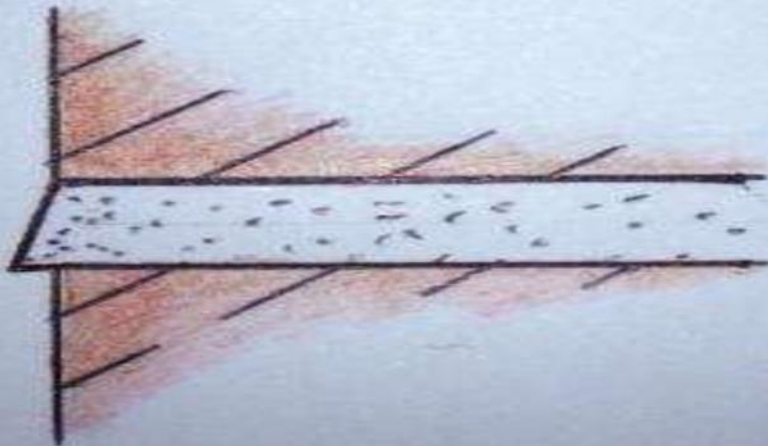
FLUSH



CUT/WEATHERED/STRUCK POINTING

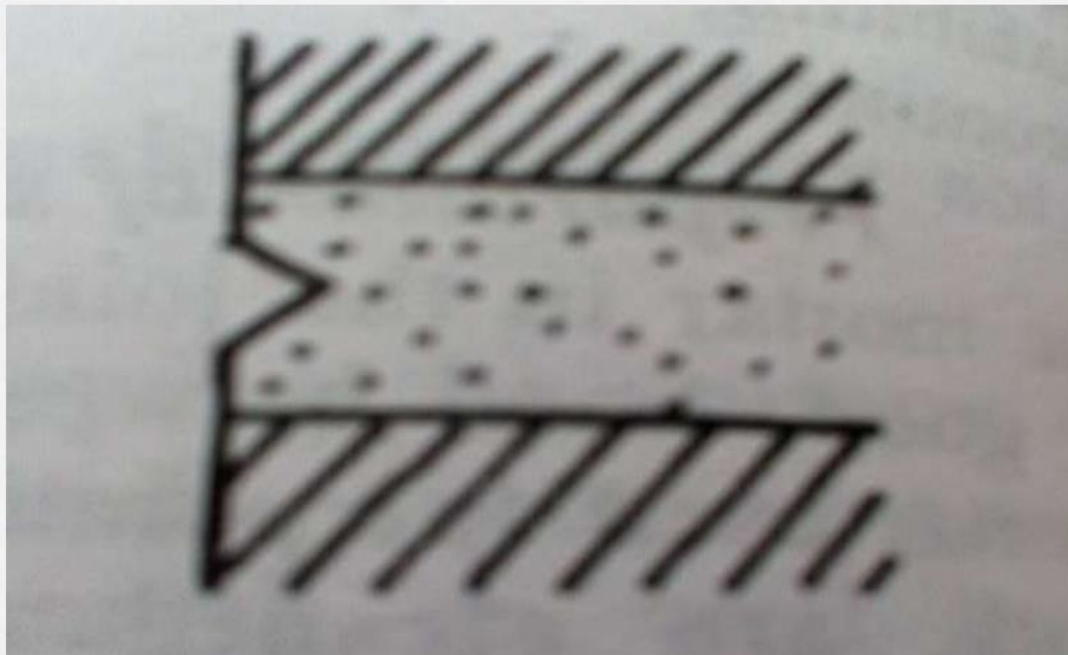
The mortar is first pressed into the raked joints. While the mortar is still green, the top of the horizontal joints is neatly pressed back by 3-6 mm with the pointing tool. Thus the joint is finished sloping from top of the joint to its bottom.

WEATHER
STRUCK



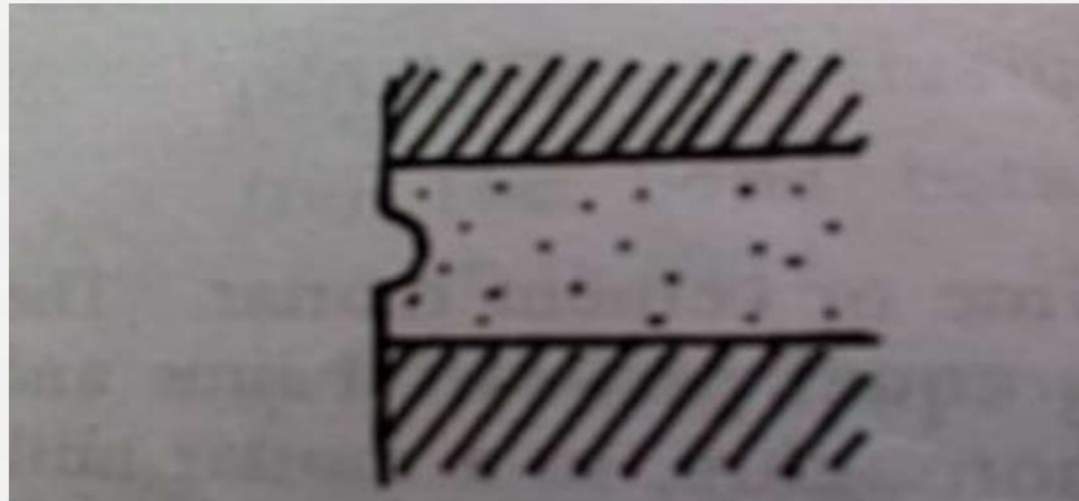
V GROOVED POINTING

This type of pointing is made similar to keyed or grooved pointing by suitably shaping the end of the steel rod to be used for forming the grooving.



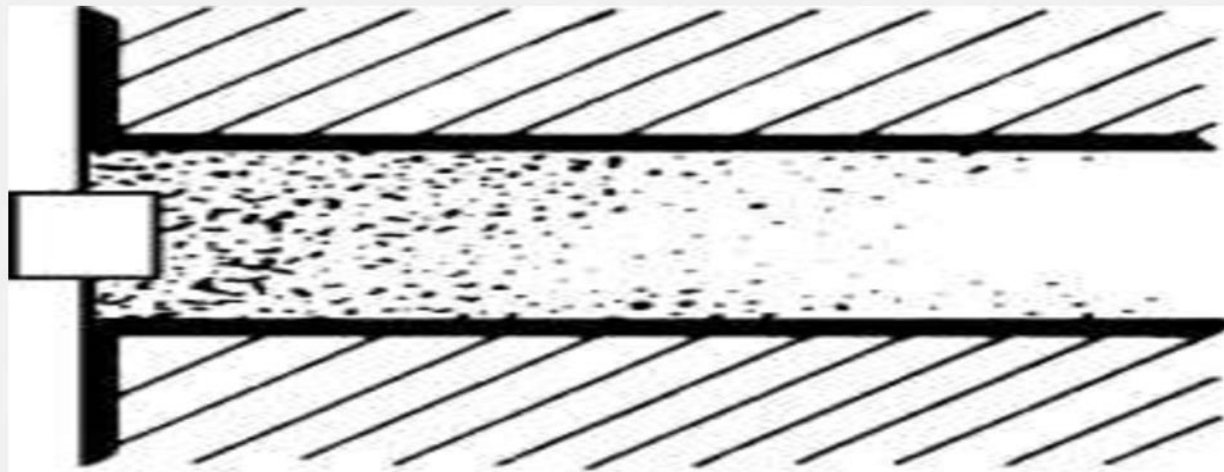
KEYED/GROOVED POINTING

The mortar is pressed into the raked joints and finished off flush with the face of the wall. a groove is formed by running the bent end of a small steel rod (6mm in diameter) straight along the centre line of the joints. The vertical joints are also finished in the same manner.



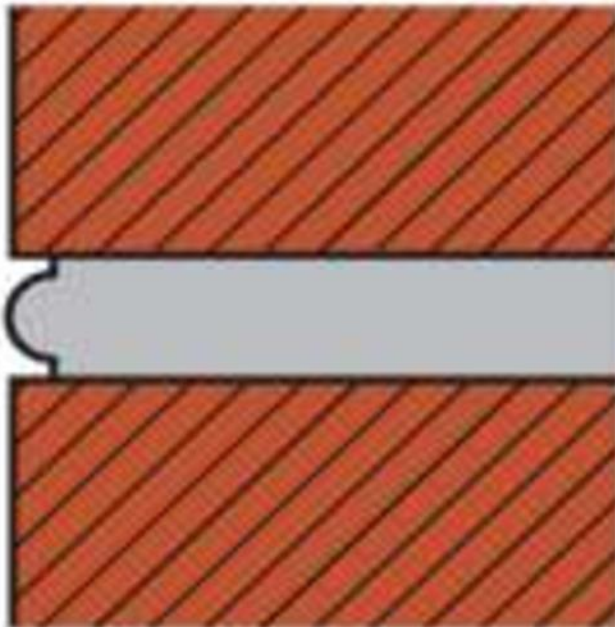
TUCK POINTING

The mortar is first pressed in the raked joints and there after it is finished flush with the face of the wall. The top and bottom edges of the joints are cut parallel so as to have a uniformly raised band about 6mm high and 10mm in width.



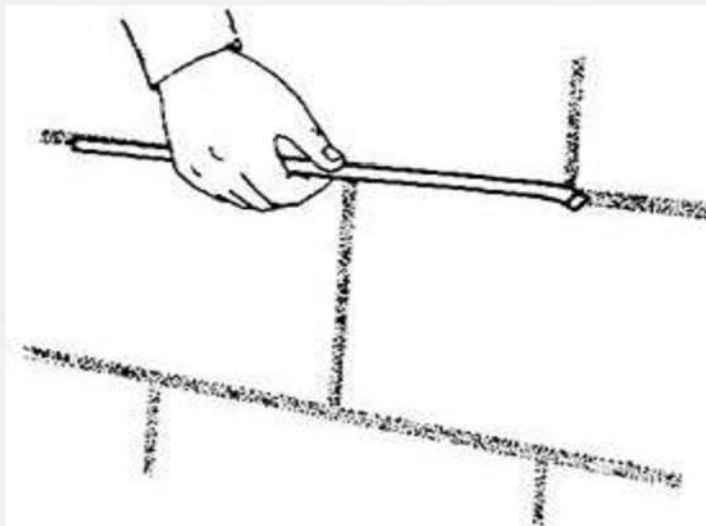
BEADED POINTING

The mortar is pressed in the raked joints and finished off flush with the face of the wall. A steel rod having its end suitably shaped is run straight along the centre line of joints to form the beading.

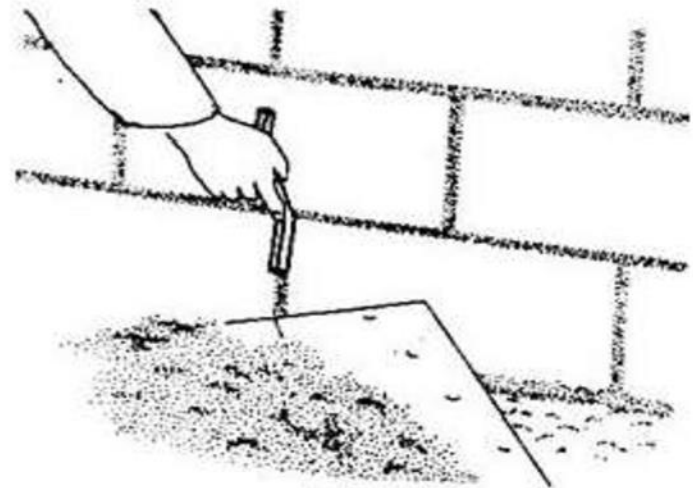


JOINTING

Jointing is the finishing of all the joints as the work proceeds. That is, building a number of courses then finishing the joints by using a pointing trowel or jointer.



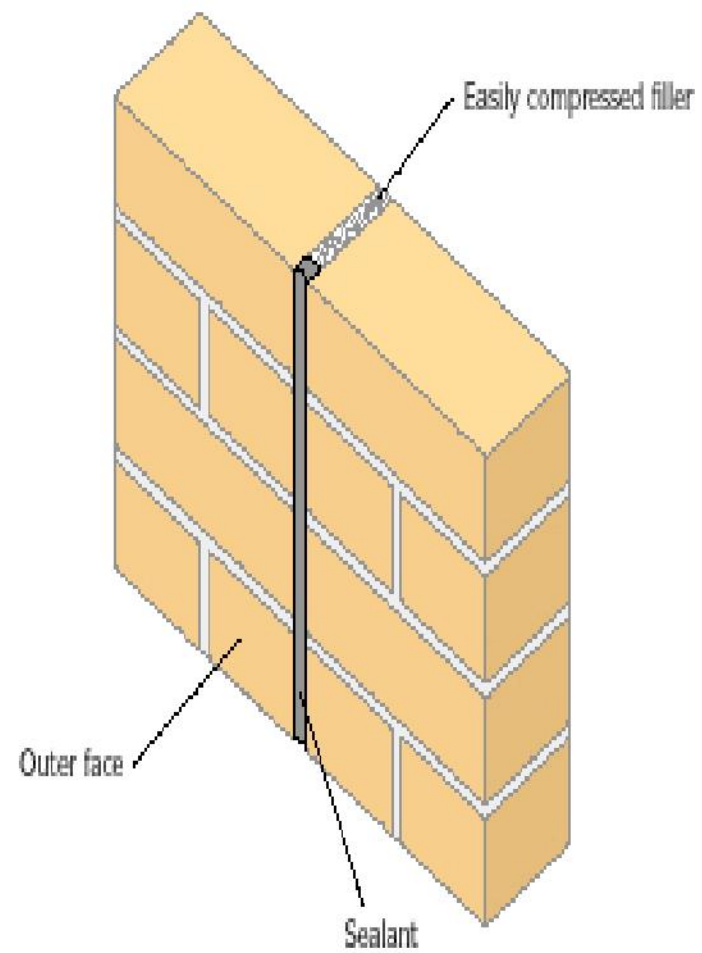
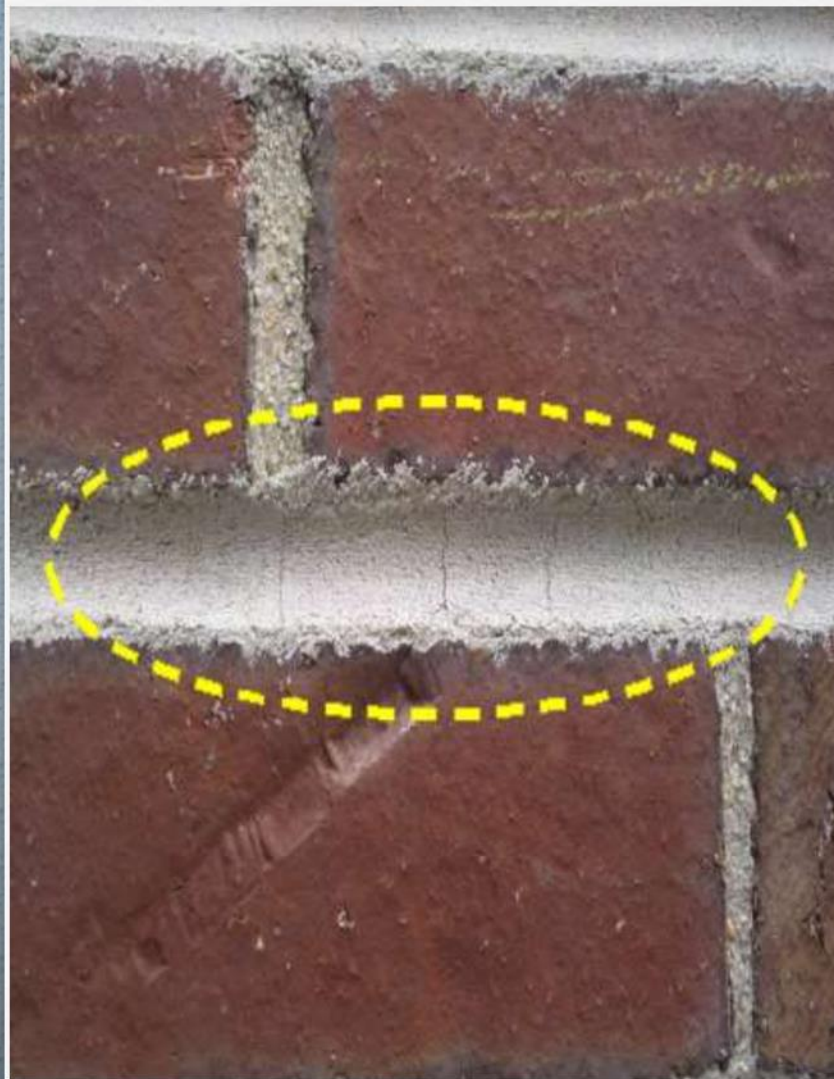
1. Striking Horizontal Joints



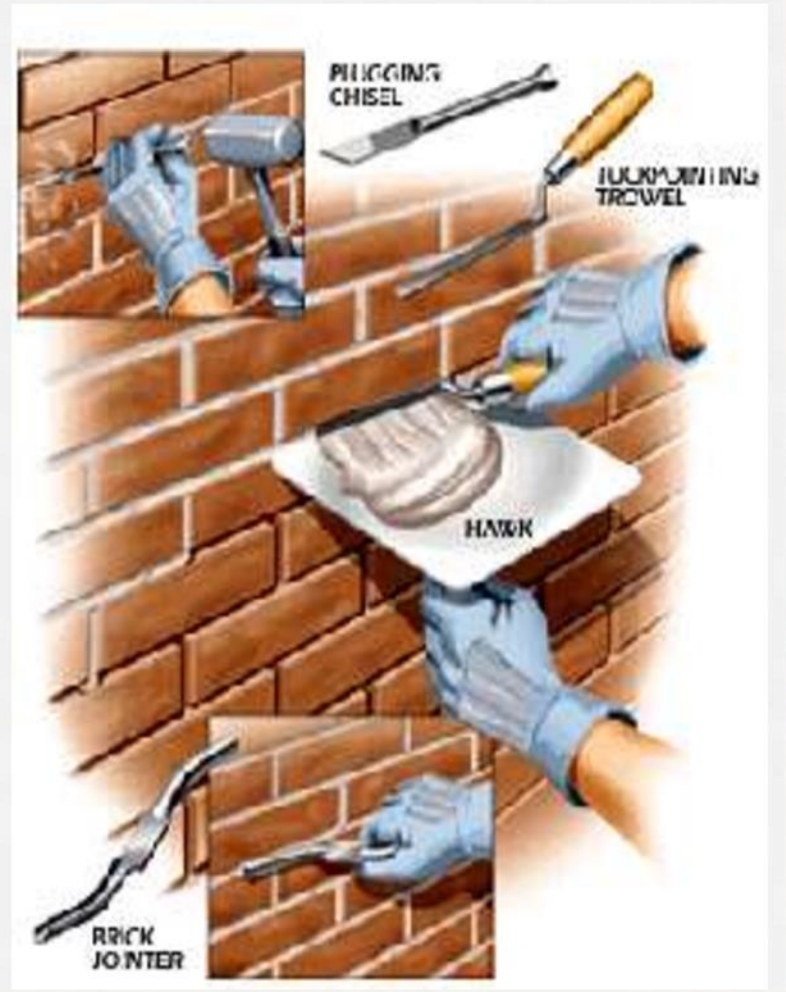
2. Striking Vertical Joints

DIFFERENCE B/W POINTING & JOINTING

- ❑ Jointing is the finish of the mortar joints between bricks or blocks , in brickwork or blockwork that is finished surface.
- ❑ Jointing is executed as the brickwork or blockwork is built.
- ❑ Pointing is the finish given to the joints by raking out to a depth of approximately 20mm and filling in one the face with a hard-setting cement mortar which could have a color additive.
- ❑ Pointing is executed as an operation separate from bricklaying



TOOLS USED IN POINTING & JOINTING



PLASTERING

- ❑ **Plaster** is a building material used for coating walls and ceilings.
- ❑ Plaster is manufactured as a dry powder and is mixed with water to form a paste when used.
- ❑ The reaction with water liberates heat through crystallization and the hydrated plaster then hardens.
- ❑ Plaster can be relatively easily worked with metal tools or even sandpaper.
- ❑ These characteristics make plaster suitable for a finishing, rather than a load-bearing material.

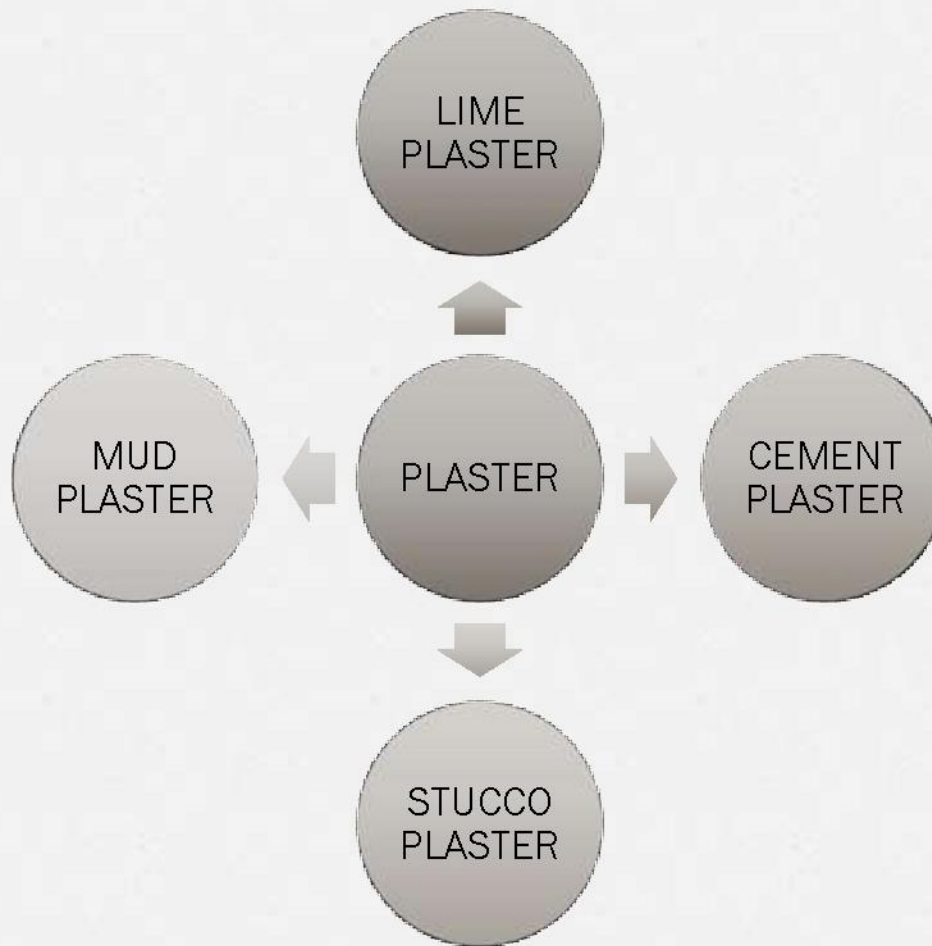


REQUIRMENTS

- ❑ It should be cheap and economical.
- ❑ It should be hard and durable.
- ❑ It should be apply to it during all weather conditions.
- ❑ It should be effectively check the entry or penetration of moisture from the surface.
- ❑ It should possess good workability.



Types of plaster



LIME PLASTER

- ❑ Lime used in plastering may be Fat Lime and Hydraulic Lime.
- ❑ Fat Lime makes best plaster as they yields good putty after slaking, Hydraulic Lime yields harder and stronger plaster, but it may unslaked particles which may slake slowly.
- ❑ As a precautions the hydraulic lime, if used, should be ground dry with sand; left for about 2 or 3 weeks and then reground before use.
- ❑ Mortar for Lime plaster is usually prepared by mixing sand and lime in equal proportions. cement in small quantity is sometimes to the mixture to improve its strength.



CEMENT PLASTER

- ❑ Cement plaster is usually applied in one coat.
- ❑ The thickness of the coat can be 12mm, 15mm or 20mm depending upon the site conditions and type of building.
- ❑ Sometimes, When the thickness of plaster is more than 15mm or when it is desired to have a finer finish, plaster is applied in two coats.



MUD PLASTER

- ❑ Mud to be used in plastering should be made from earth free from grass roots, gravel, stone grit etc.
- ❑ Mud plaster is generally applied in two coats.
- ❑ The first coat being 18mm thick while the thickness of the second coat is kept 6mm.
- ❑ The plaster is dashed against the wall and worked with a straight edge and float.
- ❑ The second coat is applied only when the first coat has set(not dry)



STUCCO PLASTER

- ❑ Stucco is the name given to a decorative type of plaster which gives an excellent finish.
- ❑ Stucco plaster can be used for interior as well as exterior surfaces.
- ❑ It is usually laid in three coats making the total thickness of the plaster to about 25mm.
- ❑ The first coat is called the Scratch coat; the second a Finer coat or Brown coat and the third is called the White coat or Finishing coat.



TOOLS USED IN PLASTERING

- ❑ STEEL TROWELS
- ❑ WOODEN FLOAT
- ❑ STEEL TROWELS
- ❑ METAL FLOAT

