

## **FLOORS**

The purpose of floor is to provide a level surface capable of supporting the occupants of the building, furniture, equipment and some time interior wall

The floor must satisfy the following requirements

- Adequate strength and stability
- Adequate fire resistance
- Sound proof
- Damp resistance
- Thermal insulations

### **Components of a floor**

Sub floor, basecourse or floor base

Floor covering or flooring

Selection of flooring materials

Factor that affect the choice of flooring

- Initial cost
- Appearance
- Cleanliness
- Durability
- Damp resistance
- Sound insulation
- Thermal insulation
- Fire resistance
- Smoothness
- Hardness
- Maintenance

### **Types of flooring**

- Mud flooring and muram flooring
- Brick flooring
- Flag stone flooring cement concrete flooring
- Terrazzo flooring
- Mosaic flooring
- Tiled flooring
- Marble flooring timber flooring
- Asphalt flooring
- Rubber flooring
- Linoleum flooring
- Cork flooring

- Glass flooring
- Plastic or pvc flooring

### **Mud flooring and muram flooring**

This type of flooring is cheap, hard highly impervious

It is easy to construct and easy to maintain

It has good thermal insulation property due to which it remains cool in summer and warm in winter

Over a well prepared ground 25 cm thick selected moist earth is spread and it rammed well to compacted thickness of 15cm

In order to prevent cracks small quantity of chopped straw is mixed

### **Muram flooring**

Muram is a form of disintegrated rock with binding material

To construct such a floor a 15 cm thick layer muram is laid over prepared sub grade over it 2.5 cm thick powder layer of muram is spread and rammed

### **Brick flooring**

The sub grade is compacted properly, to the desired level and 7.5 cm thick layer is spread

Over this a course of brick is laid flat in mortar is built

Such flooring is used in cheap construction, especially where good bricks are available

### **Flag stone flooring**

Flag stone is laminated sand stone available in 2cm to 4cm thickness in the form of stone slab of 30X30 cm or 45X45cm and 60X60 cm

This type of works also called paving.

The stones are laid on concrete base the subsoil is properly compacted over which 10 to of lime concrete or lean cement concrete is laid

### **Cement concrete flooring**

This is commonly used for residential, commercial even industrial building..

It is moderately cheap quite durable and easy to construct

The floor consist of two components

Base concrete

Topping or wearing surface

The base course ma be 7.5 to 10 cm thick

The topping consist of 1:2:4 cement concrete

Terrazzo flooring

Terrazzo flooring is another type of floor finish that is laid in thin layer over concrete topping

It is very decorative and good wearing properties

Terrazzo is a specially prepare concrete surface containing cement and marble chips in the proportion to 1:1 1/4 to 1:2

When the surface has set the chips are exposed by grinding operation

Mosaic flooring

Mosaic flooring Is made of small pieces of broken tiles of china glazed or of cement or of marble arranged in different pattern

These pieces are cut to desired shape and sizes

a concrete base is prepare as in the case of concrete flooring over that 5to8 thick lime surkhi mortar is spread over an area, over this 3mm thick cementing paste is layered and is left to dry about 4 hours,

,there after small pieces of broken tiles or marble pieces of different colors arranged definite pattern and hammered in different layers

Tiled flooring

Tiled flooring is constructed from square ,hexagonal or other shapes made up of clay cement concrete and terrazzo

These are available in various thickness

These are commonly used in residential houses, schools, hospitals and other public buildings

Over the concrete base a 25 to 30 mm thick layer of lime mortar 1:3 to serve as a bedding

The bedding mortar is allowed to harden for 12 to 24 hours

Neat cement slurry is spread over it and the tiles are laid flat over it

### Marble flooring

It is the superior type of flooring used in bathrooms and kitchens of residential buildings and hospitals, sanatorium, temples etc

After the preparation of base concrete 20 mm thick bed layer of 1:4 cement mix spread under the area of each individual slabs.

The marble layer is then laid over it and pressed with wooden mallet and leveled

### Timber flooring

Timber flooring is used for carpentry halls, dancing halls, auditorium

Etc

These are not commonly used in India because it is costlier

But in hilly areas where wood is available and temperature drops very low, timber flooring is quite common

The suspended type of wooden floor is supported above the ground

The solid type of wooden floor is fully supported on the ground