



Subject: Building Material and Construction-IV

Topic: Shuttering

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# SHUTTERING



# SHUTTERING



- Wood in planks or strips used as a temporary structure to contain setting concrete, to support the sides of trenches, or similar.
- A temporary structure made from planks.
- **Shuttering** is a vertical temporary arrangement which is arranged to bring concrete in a desired shape. or. **Formwork** which supports vertical arrangement is known as **shuttering**.
- In a technical point of view, **Formwork** for columns, footings, retaining walls is called as a **Shuttering**.

# TYPES OF SHUTTERING

1. Timber shuttering
2. Plywood shuttering
3. Steel shuttering



# TIMBER SHUTTERING



- Timber for shuttering should satisfy the following requirement:
- It should be:-
- Well-seasoned
- Light in weight
- Easily workable with nails without splitting
- Free from loose knots
- Timber used for shuttering for exposed concrete work should have smooth and even surface on all faces which come in contact with concrete.

# TIMBER SHUTTERING



# Table 1: Normal sizes of members for timber formwork



Sheeting for slabs, beam,  
column side, and beam  
bottom

25 mm to 40 mm thick

Joints, ledges

50 x 70 mm to 50 x 150  
mm

Posts

75 x 100mm to 100 x 100  
mm

# PLYWOOD SHUTTERING



Resin-bonded plywood sheets are attached to timber frames to make up panels of the required sizes.

The cost of plywood formwork compares favorably with that of timber shuttering, and it may even prove cheaper in some instances given the following considerations:

- It is possible to have a smooth finish in which case on cost in surface finishing is there.
- By the use of large-size panels, it is possible to affect saving in the labor cost of fixing and dismantling.
- The number of reuses are more as compared with timber shuttering. For estimation purposes, the number of reuses can be taken as 20 to 25.



# Plywood shuttering



# STEEL SHUTTERING



- This consists of panels fabricated out of thin steel plates stiffened along the edges by small steel angles.
- The panel units can be held together through the use of suitable clamps or bolts and nuts.
- The panels can be fabricated in large numbers in any desired modular shape or size.
- Steel forms are largely used in large projects or in a situation where large number reuses of the shuttering is possible.
- This type of shutter is considered most suitable for circular or curved structures.

# Steel shuttering



THANK YOU...

