

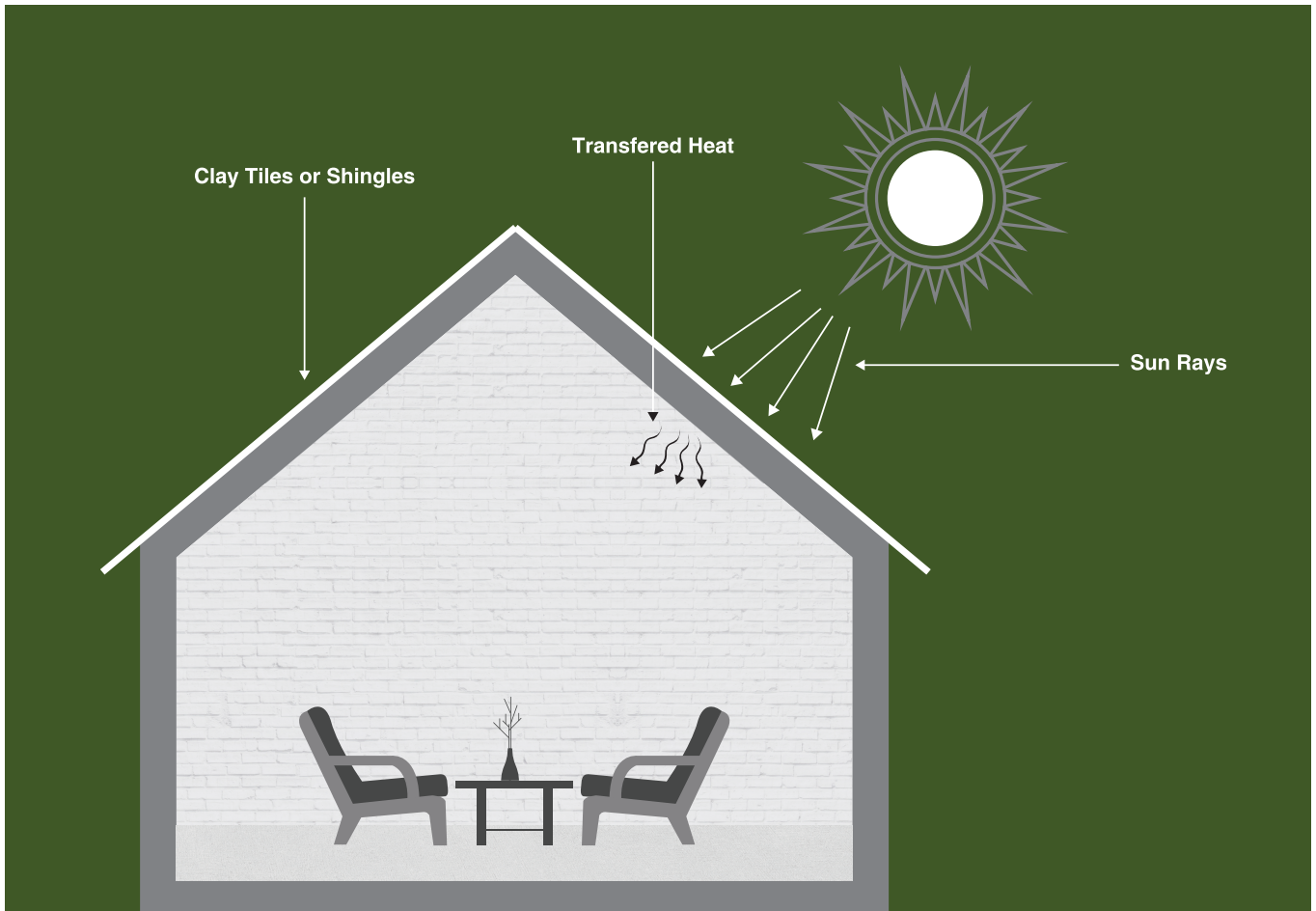
**ROOF
THAT
KEEPS
ROOM
COSY**

INCLAY SYSTEMS®

SLOPING/HUT TYPE INSULATION

RCC HAS HIGH THERMAL CONDUCTIVITY

In order for a roof to provide protection and proper shelter to the occupants, it is made of RCC, which has high compressive strength. Roof is the only part of building that is exposed to sun from sunrise to sunset. Hence, the ideal material used for roofing should have lower thermal conductivity and higher thermal resistance. But RCC's thermal conductivity, at 1.58 W/mK, is very high.



RCC ROOF HEATS UP THE ROOM

Due to this, heat enters and affects the inside of the building throughout the day. Greater the spread of the roof, greater the heat absorbed. This is where sloping roofs come into picture. They have more area compared to horizontal roofs, almost an addition of 50% more to the horizontal surface. Sloping roofs are generally done to increase the aesthetic of a building and to avoid water logging on horizontal roofs. These roofs are usually covered with either clay tiles or shingles. There is a general belief amongst people that using clay tiles or shingles on top of such roofs acts as insulation. This isn't entirely wrong, but the amount of insulation that they provide is not sufficient enough to gain the desired thermal comfort.

- **Roof is exposed to sun from sunrise to sunset**
- **RCC has high thermal conductivity**
- **Clay tiles and shingles require insulation**

INCLAY SYSTEM REDUCES HEAT TRANSFER

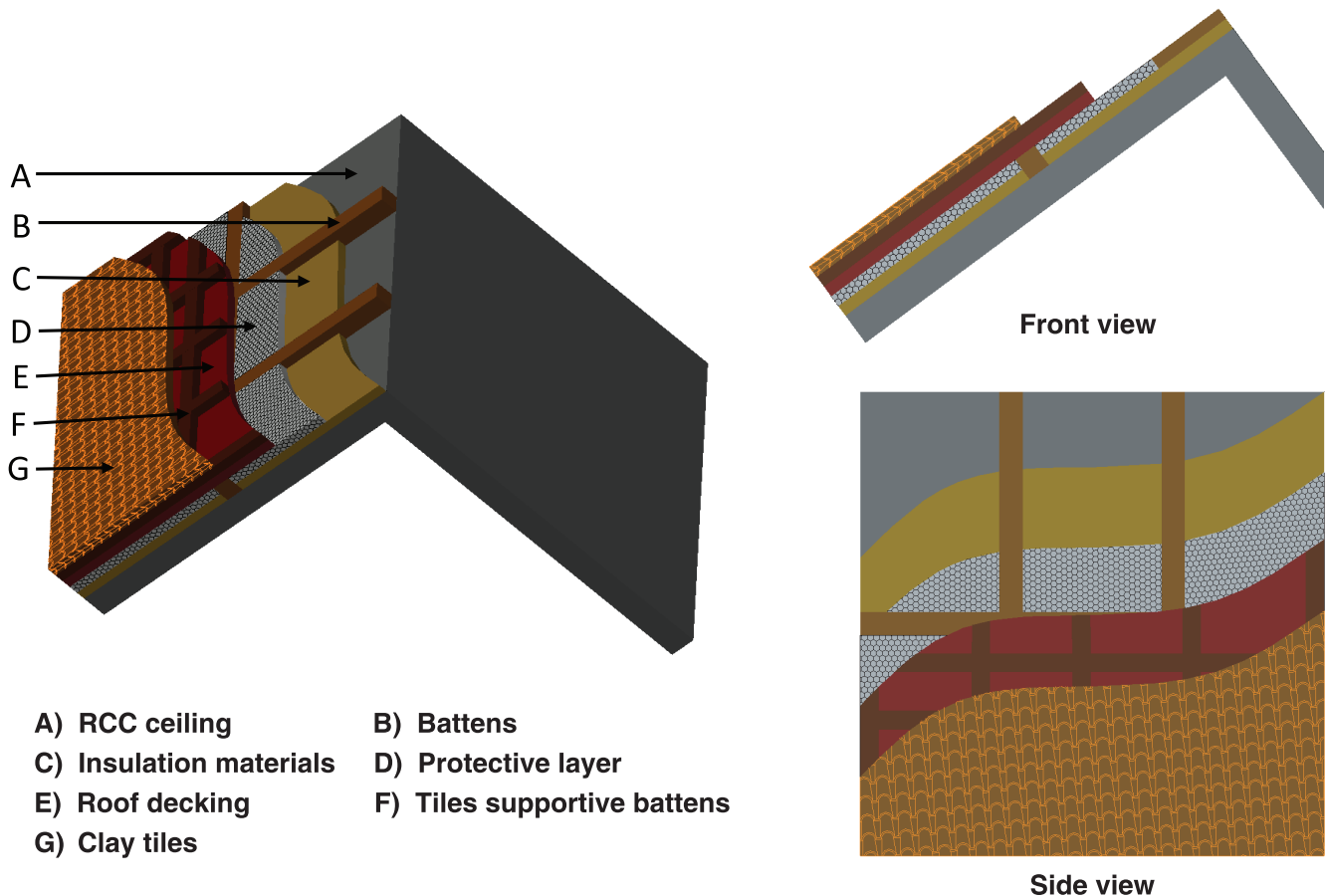
Insulation material can be used to reduce the ingress of heat. The RCC slab is used as a base on which counter battens are installed. Insulation materials are placed between the counter battens to reduce the heat transfer by radiation. Protective layers are used on the insulation material to reflect the solar radiation and to eliminate the risk of condensation, which also works as a moisture barrier. After this, roof decking (sheathing) is done as a layer for the base of tiles. The supportive battens are generally made of wooden material and used to provide the fixing point for roofing materials such as clay tiles. Some space should be provided between the clay tiles for draining rain water. Clay tiles or shingles are generally used as a finishing material in this system on supportive battens. Mortar is used to provide bonding between clay tiles.

Sloping Roof Insulation is Effective

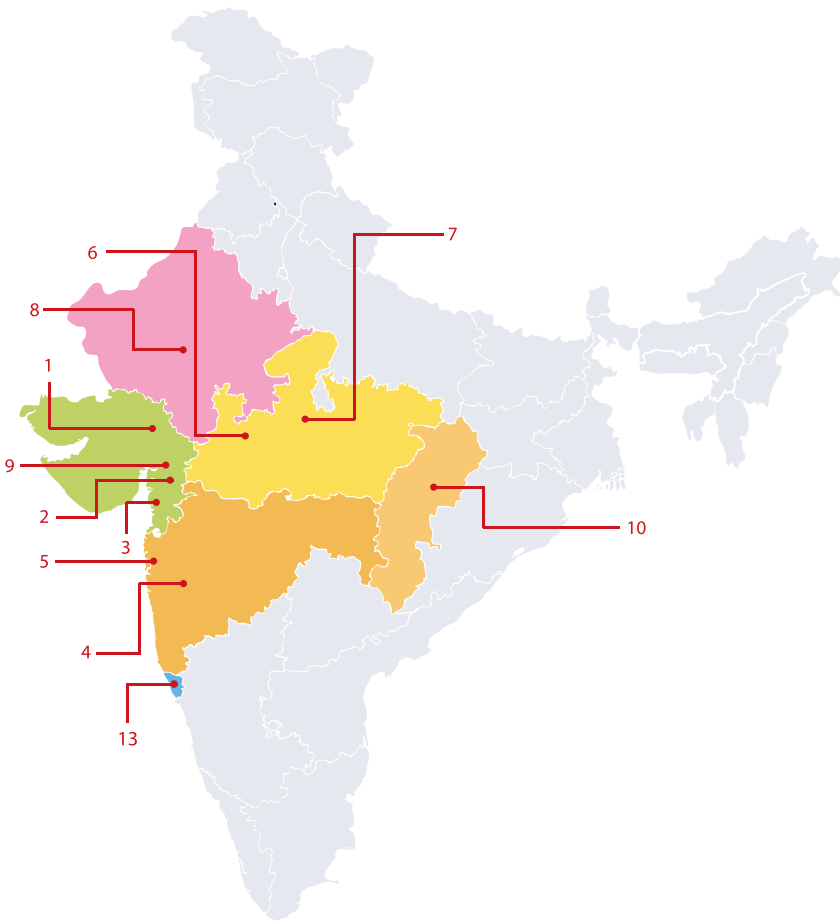
Sloping / Hut Insulation is an effective and inexpensive method of reducing the flow of heat by reflecting it. In hot climate, the insulation material resists the heat from entering into the building and thus helps in maintaining the overall temperature. The same is applicable to cold environments as well. By doing this, the thermal comfort of the building can be maintained and the loss of energy can be prevented. Suggested thickness for this system is between 12 mm to 75 mm, depending on the location of the building.

Ideal For

Any building with conventional horizontal roof or sloping roof for colonial look.



- InClay systems reduce the ingress of heat from the roof
- InClay systems can make sloping roof more effective



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