Building Material

Building Stones:

Stones are obtained from rocks. They have been used for years for building construction and other engineering works. They are obtained in different sizes, colors. Their qualities are also different. Their properties depend on the quality of the rocks.

The hardest granite (Granite) and the softest is Serpentine. Marble is available in many colors. The sandstone is easily carved up. It is difficult to work on basalt and trap.

Uses of stone - Stones are a hard, solid, strong and durable construction material. It is used in the following works:

- Building construction – in foundations, walls, pillars etc.
- Heavy Construction Works- Bridges, dams, power houses, dock works, aquatic structures
- Construction of roads -in the form of ballasts in the base of the roads, in the middle coat, and in the surface buoyancy.
- Railways- As ballast under railroad, in making sleepers.
- In concrete production - as ballast in cement, concrete.
- In lime and cement production
- For crafts works and sculptures
- Distance stones - for kilometer and boundary stones.

BRICKS

Brick is an artificial material. It is made with the help of soil. For this, after grinding a special type of soil and grinding it, add water and make it dry. With the help of mold, we prepare this prepared soil in a rectangular block of equal measure. Their special properties are light in size and weight. It is sufficiently hard, strong and durable. It is cheap and good manufacturing material. Bricks are burning in a kiln for use in construction. These become tolerant to high temperature.

The measurements of bricks are different in different countries. According to (Bureau of Indian Standards) -2117, the brick size is (19x9x9) cm. But it is made in 9x4 3 "size, as it is made in the private sector. The 19x9x9 cm brick is also called modular brick. It occupies more space than the prevailing bricks.

Uses of Bricks: There are following uses of Bricks:

- Building construction

- In Flooring
- Making of Drains
- Road construction
- For making Brick ballast

Raw materials used for bricks manufacturing

Soil: Soil is used that can be easily kneaded by mixing water; molds can be made into rectangular blocks and do not crack and dry when dry. According to Indian Standards Institute the following components should be present in bricks:

Code- (SSCLIM)

- S- Silica- 35 to 50% by wt.
- S - Silt - 20 to 35% by wt.
- C- Clay - 20 to 30% by wt.
- L- Lime - 2 to 5% by wt.
- I- Iron oxide - 3 to 5% by wt.
- M- Magnesia- 1%

The main component of 1% brick is silica. This is the highest quantity, but in any case the amount of soil and silt should not be less than 50%.

Harmful Ingredients in Bricks: There are following harmful ingredients in bricks,

- Lime
- Iron Pyrites
- Gravel, Kankar
- Alkalis
- Grass, root etc.

Site Selection of Brick's soil: The following things should be in mind at the time of site selection.

- Adequate Soil reserves
- Reach on site
- Water free area
- Availability of water
- Away from population
- Low cost land
- Follow of Rural development rules

Manufacturing of Bricks: There are following things should be in mind.

- Field selection and testing of Bricks Clay
- Preparation of Brick earth.
- Moulding of bricks
- Drying of bricks
- Burning of bricks

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