

## Properties of good building stone ;

- **Texture** : A good building stones must compose fine crystalline structure which should be free from cavities, cracks or patches of soft or loose material. Stones with such texture are so strong and durable.
- **Toughness Index** : If the value of toughness index comes below 13 in impact test, then the stone is not tough. If the value comes in between 13 & 19 then stone is said to be moderately tough and if it exceeds 19 then stone is said to be highly tough.
- **Hardness** : As worked out in a hardness test, the coefficient of hardness should be greater than 17 for a stone to be used in a road work. If it is between 14 & 17 then it is said to be medium hardness and if it is less than 14 ,it is said to be of poor quality.
- **Crushing strength** : For a good building stone, the crushing strength should be greater than 100 N/mm<sup>2</sup>.
- **Durability** : A good building stone should be durable and for making stones durable, their natural bed should be carefully noted.
- **Appearance** : Those stones which are used for face work should be decent in appearance. They should be able to protect their color for a long time.
- **Percentage wear** : If the wear is more than 3 in attrition test, the stone is not acceptable. For a good building stone, the wear should be equal to or less than 3%.
- **Specific gravity** : Good building stones must have specific gravity greater than 2.7
- **Water Absorption** : We know that all the stones are more or less porous in nature but for a good building stones, percentage of water absorption by weight after 24 hours should not exceeds 0.60 .

## **Uses of good building stone ;**

Stones are used in the following civil engineering constructions:

- Stone masonry is used for the construction of foundations, walls, columns and arches.
- Stones are used for flooring.
- Stone slabs are used as damp proof courses, lintels and even as roofing materials.
- Stones with good appearance are used for the face works of buildings. Polished marbles and granite are commonly used for face works.
- Stones are used for paving of roads, footpaths and open spaces round the buildings.
- Stones are also used in the constructions of piers and abutments of bridges, dams and retaining walls.
- Crushed stones with gravel are used to provide base course for roads. When mixed with tar they form finishing coat.

Crushed stones are used in the following works also:

- As a basic inert material in concrete.
- For making artificial stones and building blocks.
- As railway ballast.