

Practical No.5: Perform field test on given sample of brick.

- I. Practical Significance-** Bricks are basic building blocks of masonry work and construction. Field tests like dropping, striking, and scratching on a given sample of brick provide practical outcomes related to strength, durability, surface hardness, quality control, and material suitability. These outcomes guide construction decisions and contribute to the overall success and longevity of the built structure.
- II. Industry or Employer Expected Outcome-**
Undertake safe building construction practices with relevant building materials.
- III. Course Level Learning Outcome-**
Use the relevant type of special purpose construction materials in the given situation.
- IV. Laboratory Learning Outcome-**
Perform field test on given sample of brick.
- V. Relevant Affective domain related Outcome**
 1. Follow safety practices
 2. Practice good housekeeping
- VI. Relevant Theoretical Background**
 1. **Dropping Test** -When bricks are dropped from the height of 1 to 1.2m (4 feet), it should not crack or break. This ensures the durability and quality of bricks.
 2. **Striking Test**-For struck test, take 2 bricks and strike each other along the longer edge. If it produces metallic or Ring bell sound, the bricks are quality bricks.
 3. **Scratching Test**- When bricks are scratched by iron nail it does must produce any impressions on the surface, these bricks are quality bricks.

Classification of Burnt Bricks-

a) First Class Bricks-

These are 19 x 9 x 9 cm in size. They are made from good earth, free from saline deposits.

They should be thoroughly burnt.

They should be of good color. They should be of regular shape with square edges and parallel Faces.

b) Second Class Bricks-

Second class bricks are also fully burnt and give a clear ringing sound when struck together. Slightly irregularities in shape, size or color are accepted.

Slight difference in the structure on fractured surfaces is admissible.

IX. Precautions to be followed

1. Handle the particular Brick sample very carefully so that it will not break at any stage.
2. There should not be any marking with pen or pencil on the given Brick sample.

X. Procedure

1. Conduct the visit to Perform field test on bricks.
2. Student should select the bricks and conduct the test such as dropping, striking and scratching.
3. Student should observe the bricks and action of dropping, striking and scratching.
4. Identify the properties of brick.

XI. Observation Table

Sr.No.	Test	Size of Brick	Observation
1	Dropping	21 x 7 x 10 cm	brick is not broken
2	Striking	20.5 x 7.5 x 11 cm	brick sounded metallic
3	Scratching by nail	19 x 9 x 11 cm	we does not observed any embreshion on brick survious.

XII. Result

In all three test the brick shoud same level of damage indicating they are not completely resistant to impact bricks are strenth

XIII. Interpretation of results

bricks are the basic building blaks of measanary work and construction the brick

XIV. Conclusions and Recommendations (if any)

In conclusion the finding underscore the significance of choosing bricks variteis depending of their interded use.

XV. Practical Related Questions

Note: Below given are few sample questions for reference. Teachers must design more such questions so as to ensure the achievement of identified CO. Write answers of minimum three questions.

1. Write the standard Size of bricks
2. Write the Use of First-class bricks.
3. State the function of second-class bricks.
4. State the water absorption capacity of first-class brick.
5. Compare compressive strength of brick.

Q. 1 \longrightarrow ?

Ans:- the standard size of brick in India is 190 millimeter by 90 millimeter by 90 millimeter.

Q. 2 \longrightarrow ?

Ans:- First class bricks are used for load bearing structure flooring and exposed cells.

Q. 3 \longrightarrow ?

Ans:- they are still suitable for load bearing walls but may not be used for exposed walls.

Q. 4 \longrightarrow ?

Ans:- 15 - 20 % of its dry weight after being dipped for 24 hours in cold water.

XVI. References/ suggestions for further Reading

Sr.No.	Links	Discription
1	https://youtu.be/lwuqPGHotwE?si=ZzXDsrBwneM52000	Field Test on brick
2	https://youtu.be/RsB7-IXafYM?si=CRynoGVsOC-ugjAu	Field Test on brick
3	https://bitly.ws/3cR3j	-