

SECTION - 5Q1Ans A. Lime Bursting Problem:

i. A common defect of brick and tiles is a weakening or breaking of bricks/tiles, which is caused by the hydration of quick lime property derives from limestone in brick/tiles making clay.

⇒ Efflorescence:

(1) This defect is caused because of alkalis present in bricks. When bricks come in contact with moisture, water is absorbed by them.

(2) The process often continues for many years depending on the quantity of salt present in the bricks and solubility.

3. The less soluble salts (such as calcium sulphate), take much longer period to be leached out.

4 Magnesium salts are very soluble and are most destructive.

S^o This can be achieved by providing waterproof coating and by using water repellent material in mortars and by providing damp proof course.

6 Efflorescence can be minimized by selecting proper clay material for bricks.

7. This absorbed water dries out by evaporation from the exposed faces, and as it does so, the soluble salts it contains crystallize on the brick surface.

8. Brick which have been saturated before their placement in masonry will be more prone to efflorescence than those under dry condition.

⇒ Efflorescence Test : 7

- (1) In brick work water moves along its pores by capillary action and carries with it dissolved salts.
- (2) The test procedure to test efflorescence consist of dipping the ends of brick in distilled water placed in a dish.
- (3) When water is completely absorbed and evaporated, place similar quantity of water in dish and allow it, to absorb and evaporate as before.
- (4) Examine the brick after this and find out the percentage of white spots to the surface area bricks.