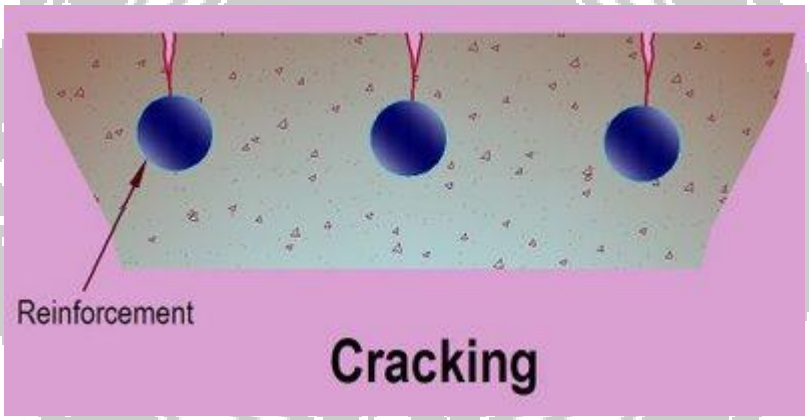
**CRACKS PARALLEL TO THE REINFORCEMENT.**

**CONCRETE CRACKING DUE TO CORROSION OF REINFORCEMENT**

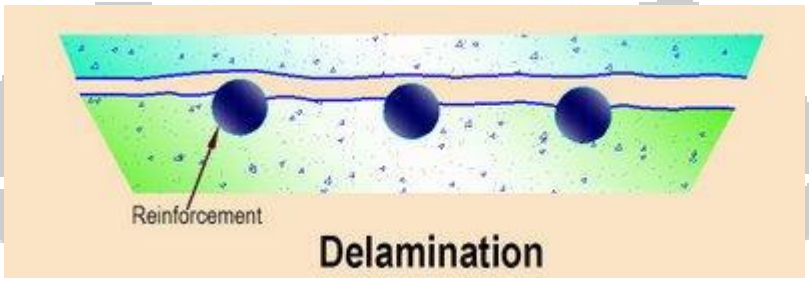
- The corrosion of steel reinforced concrete member by the formation of electro-chemical cell results in cracking (characteristically parallel to the reinforcement), spalling or in delamination of concrete.
- This corrosion may occur due to chloride attack and carbonation.

**MECHANISM OF CRACKING**

- The corrosion of steel results cracking and further deeper propagation of cracking in two successive steps. Firstly The production of corrosion occupies a volume several times larger than the original steel so that their formation results in cracking. This makes it easier for aggressive agents to ingress towards the steel, with a consequent increase in the rate of corrosion. Secondly The progress of corrosion at the anode reduce the cross-sectional area of steel,




Location of appearance These are normally seen in columns and beams where environment is in favor of corrosion.




Remedy Good quality concrete adding suitable admixture depending on the environment surroundings of desired concrete member. Providing adequate clear cover also discourage cracking of this type.

## C.SWELLING OF CONCRETE

Swelling, turgescence or tumefaction is a transient abnormal enlargement of a body part or area not caused by cells. It is caused by accumulation of tissues. It can occur throughout the body (generalized), or a specific part or organ can be affected (localized).

Swelling is considered one of the five characteristics of inflammation; along with pain, heat, redness, and loss of function.