The feature of HYDROPROOF

Water

《The cause of degradation of concrete》

Has not it leaked?

Isn't the concrete crack carried out?

Concrete hurts.

Concrete should be alkalinity.
If Neutral advances, composition of concrete will become is easy to be destroyed and it will become weak.

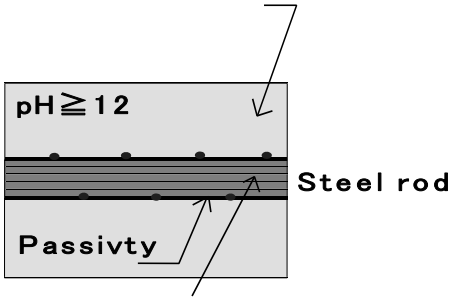
Air pollution by today's acid rain which is notably made of especially the city part the exhaust gas of a car etc. Moreover degradation progresses because concretes explosion by the freeze of the intension moisture in the area of the beach which briny air blows inhale moisture.

Although it seems that the surface has been painted several times the carbon dioxide in the atmosphere reacts with the water calcium oxide in concrete. pH falls. The concrete which turned neutral by thisloses surface intensity, passivty is destroyed and a steel rod rusts. And expansion, explosion, and degradation advance.

Three degradation systems to know

A healthy state

A water calcium oxide exists so much in concrete. 12 or more pH high alkalinity is maintained.

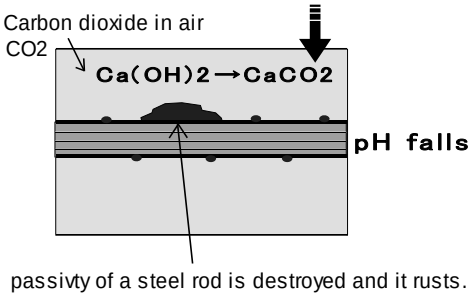


A steel rod is protected by passivty and does not rust.

Neutral

It is a water calcium oxide in concrete. (calcium2 (OH)) It reacts with carbon dioxide and becomes a calcium oxide. ph falls.

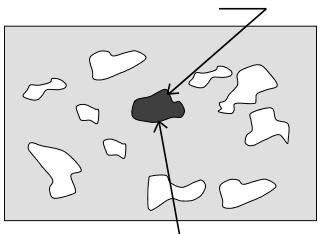
Neutral advance is carried out from the surface.



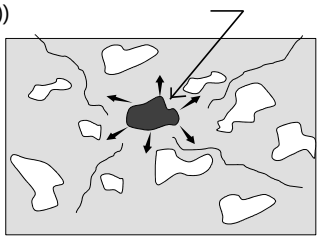
passivty of a steel rod is destroyed and it rusts.

Alkali aggregate reaction

aggregate reaction reacts with the alkali ingredient in cement.gelation (hygroscopic expansion swelling) is generated.



Aggregate reaction

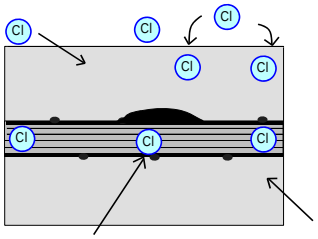


gelation absorbs and expansion swelling and a crack arises to concrete.

Damage from salt water

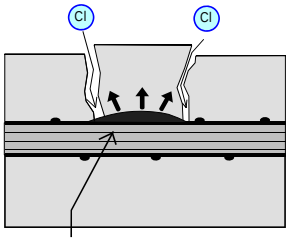
Chloride ion supplied by briny air etc. from the outside

Chlorination ion permeates an insi de gradually



Chloride ion destroys passivty and a steel rod rusts.

Chloride ion mixed together with sand etc.



A crack arises to concrete with the expansion pressure of rust.

Furthermore a steel rod becomes easy to rust.

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