Use the resistivity to study the location and dynamic distribution of moisture in concrete

Background

- The actual service life of concrete buildings less than the expected life.
- The aged population is currently at its highest level in human history.
- Lake of natural resources.

→ Repairing existing buildings is important.

Moisture is the key cause of deterioration

1. Water exists in concrete in many forms.
2. Water and chloride ions present in the pore structure.
3. Chloride ions ingress into concrete through pores with water.
4. Pore structure is continuously developed and changed.

Purpose

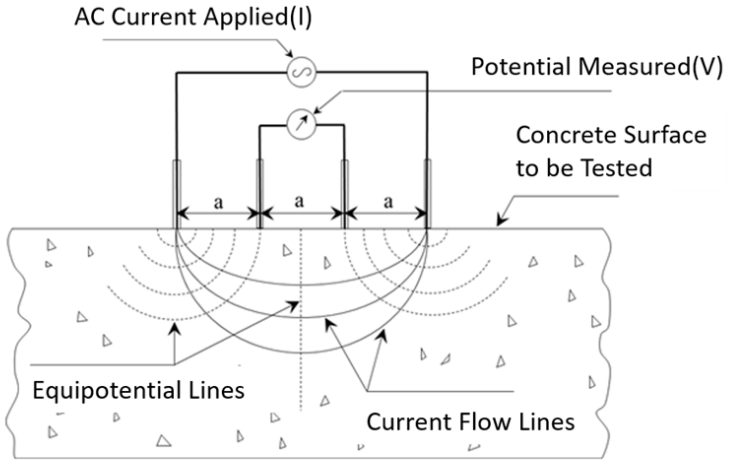

Illustration of the four-electrode (Wenner) method

Position of moisture

Resistivity of concrete

→ *Predict the starting of deterioration*