

Test Laboratory for Environment Conscious Materials

● Outline

This facility is used to test the performance of construction materials under various environmental conditions. The laboratory is furnished with equipment and instruments to test the durability of construction materials within a wide range of adverse environmental conditions such as high concentrations of corrosive salts in coastal areas, sub-freezing temperatures in northern climates, and the widely publicized phenomenon of acid rain.

● Programmable chamber

This room is used for the cure of materials or for the acceleration in degradation process under various environmental conditions, with its ability to set and control both temperature and humidity inside freely. To be correspondent with the wide-range experimental conditions, this room equips three type machines, which are respectively characterized for standard condition, more cryogenic and high temperature.

● Dynamic loading-deformation testing machine

This testing machine can measure and evaluate the static-fatigue performance of building materials and components by loading with an oil hydraulic actuator. This machine is a general-purpose equipment to be able to test from a small material size to a large component size. We are testing by changing the loading-deformation parameters and using various building materials and components.



Programmable chamber



Dynamic loading-deformation testing machine