

## 11. Research on the Effect of the Base to the Exterior Wall Paint Finish — Effects to the Coating Film by Moisture of the Base and the Sealant—

Takanori Okihashi

There is a case in which material and condition of the base lower the durability of the paint finish and cause fouling. In this study, the effect of moisture in the base and sealant to the painting was confirmed.

In the case of paint finish on concrete and mortar base, surface water contents must be 10% or less, as described in standard specification of construction and maker catalogs. For this, adhesive strength test and exposure test of the coating material applied on the base which is not well dried were examined in order to confirm how the moisture in the base gives adverse effect to the finishing. 1) Adhesive strength tests on film coating specimens under different conditions; regular, wet, varied temperature. 2) Weather exposure test, and accelerated degradation test on spray-coated specimens. Results of tests 1) and 2) were compared to prove degradation degrees of each coating material applied on not well-dried bases.

In joints and crack repair parts of the exterior concrete wall, irregular color or fouling may appear, caused by chemical reactions between sealing compound and the coating paint. To avoid this, sealant makers offer non-bleeding sealant as their product, and paint makers produce primers, which prevent plasticizer conversion. The exposure test was carried out on materials with paints on the sealing to confirm the combination of materials, which does not damage the finishing.

**Key words :** coating material, moisture in base, water content, sealant, stain