

## **6. Research on Performance Evaluation Method of Finishing Tile Bonding**

**Takanori Okihashi, Takashi Uenishi, Masanori Kono**

In order to prevent tiles from flaking off the exterior walls, laboratory and full-scale exposure tests were conducted to track down the cause of tile flaking when tiles are applied directly to the base, and to verify the base treatment method and the performance of materials to be applied. As a result, in outdoors exposure test, solar heat raises the wall temperature causing distortion gap between tiles and concrete, which expand in different degree. However, in year-round temperature fluctuation, contraction from the declining temperature causes relatively similar gap. In laboratory test, it was found that the flaking of tiles was caused by the progress of strain of base concrete due to drying shrinkage or creep, and the relationship between the strain of the base and the deterioration of bond strength was identified.

**Key words** : tiles, tile application using no base, behavior in line with the progress of strain, creep, bond strength