7. A Study on the Estimation of Strain on the Tile Finish of Existing Buildings

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The soundness of tile finish in existing buildings is generally evaluated by investigating the exfoliated area or conducting bonding strength tests. Exfoliation, however, sometimes occurs in areas that are found sound in investigations. Then, a method was proposed to measure the size of strain on bonded tiles with strain gauges affixed in order to evaluate the vulnerability of tiles on tile-finish walls of existing structures to exfoliation. Laboratory verification tests and outdoor field applicability tests were conducted for a proposed test method. As a result, it was found that the test method enables the measurement of strain on tiles.

Keywords: tiles, existing structures, contraction, strain, exfoliation