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Structural Health Monitoring for Civil Infrastructure Systems: From Research to Application

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Structural health monitoring (SHM) for large-scale bridges has been practiced more than 10 years in Hong Kong, and the SHM system for recently built Stonecutters Bridge, comprising 1,505 sensors, is deemed to be the most heavily instrumented bridge project in the world. Implementing these SHM systems gave an impetus to the research on structural condition and damage assessment methods specific for large-scale bridges, and also provided unique field measurement data for verifying the applicability of various damage diagnosis algorithms to real-world structures. This paper outlines the evolution of SHM systems for large-scale bridges in Hong Kong, a variety of validated condition and damage assessment methods, and the extension of SHM practice from bridge structures to building structures. The integration of SHM and renewable energy technologies is also discussed.

Ключевые слова:

Содержание.

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