

عنوان مقاله:

A Review of Self-Sensing Based Structural Health Monitoring

محل انتشار:

دومین کنفرانس بین المللی معماری، عمران، شهرسازی، محیط زیست و افق های هنر اسلامی در بیانیته گام دوم انقلاب (سال: 1401)

تعداد صفحات اصل مقاله: 15

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خلاصه مقاله:

Monitoring, inspecting, and detecting structural damage can be automated with structural health monitoring systems (SHMs). A reliable and long-term structural sensing ability is crucial for an SHM system to function. In addition to fiber optics, piezoelectric sensors, magnetoresistance sensors, and self-diagnosing composites, various sensors can monitor the health of a structure, ensuring its long-term performance. SHM refers to active monitoring systems that use piezoelectric and magnetorestrictive sensors as actuators. In today's world, smart sensing technologies can be implemented, and civil engineering structures can maximize their SHM effectiveness. A review of smart materials and sensors in SHM of civil engineering structures is presented in this paper. Specifically, laboratory and field studies are being conducted on smart materials and sensors for civil engineering structures

کلمات کلیدی:

Smart concrete, smart materials, self-sensing, damage detection, structural health monitoring

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<https://civilica.com/doc/1613637>

