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Sensors with Embedded Memory for SHM Applications

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When SHM systems are designed and build at construction period of new or renovated buildings, their intensive usage for structure performance analysis will be tens or hundreds years later. It may be expensive to maintain the data collecting and processing equipment for such a long period of time. By the other point of view the data processing devices will be cheaper and more efficient several years later, so there is no reason to use extensively the equipment during the long period of proposed service life of structure. In many cases it is enough to collect data from sensors installed on the structure during construction period, and then use the data together with contemporary data for service life evaluation and performance assessment. When the data are stored in the embedded sensor memory it is possible to automate the data collection and analysis together with improving robustness and reliability of SHM systems.

The benefits and advantages of SHM systems employing sensors with embedded memory will be discussed on several case studies for bridges, buildings and special structures, where SITIS sensors and dataloggers were used.

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Ключевые слова:

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