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Comparison of Historical In-Service Monitoring Data for Improved Maintenance and Management of Typical Bridges

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An In-Service Bridge Monitoring System (ISBMS) has been developed and implemented for gathering quantitative strain data from typical bridges, due to site-specific traffic. The ISBMS has been used to monitor 15 different bridges in Delaware, multiple times, over a period of five years. By comparing data sets collected at different times, changes in the bridge response, due to damage or deterioration could potentially be detected. Because visual comparison is subjective, a method for quantitatively comparing two data sets from the same bridge has been developed: this can be used as a low level health monitoring tool. Results of comparisons from different seasons on the same bridge did not indicate any seasonal variations in the data. In-service load rating factors were also computed and found, in most cases, to be higher than the corresponding theoretical rating factors.

Доклад. Конференция по мониторингу технического состояния гражданских сооружений (CSHM-4), «Системы мониторинга технического состояния сооружений, обеспечивающие продление срока службы сооружений». Ноябрь, 2012. Берлин. Германия.

Ключевые слова:

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Abstract

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