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Measurement Fusion for Component Estimation of Long-Term Monitoring Signal of In-Service Strain

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In-service monitoring signal of strain response not only arises from external loadings, but also from temperature influences and from inherent changes inside the material. Long-term monitored strain physically results from a multi-path combination of these effects. In this study, an approach of Wiener filter based measurement fusion for signal estimation is proposed and applied for the analysis of long-term monitoring signal of in-service strain obtained from the Tsing Ma Bridge. Through the Wiener filter based measurement fusion of temperature and strain data, strain component due to temperature effect is extracted from the raw measurements.

Ключевые слова:

Содержание.

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