



Код: 10992

Werner Lienhart

Challenges in the Analysis of Inhomogeneous Structural Monitoring Data

Берлин, Германия, 2012 год

9 стр; формат: 23,5 x 16 см; библиографический список: 7 единиц

The data collected in monitoring projects is typically inhomogeneous and does require new analysis methods. In this paper it is demonstrated that traditional descriptive deformation models are not suitable for the analysis of the monitoring data of complex structures like monolithic bridges. Spatially distributed measurements without connection measurements can only be linked together with cause-response deformation models incorporating a physical model of the structure. If this link can successfully be made in an Integrated Analysis then it is possible to assess if the measured deformations represent the normal structural behaviour caused by changing environmental conditions.

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:

Содержание

Abstract

Introduction

Traditional Geodetic Deformation Monitoring

Monitoring of the Monolithic Bridge Minkelkehre-Adlerhorst

2.1 Bridge Design

2.2 Measurement Program

Analysis of the Inhomogeneous Monitoring Data

3.1 Analysis of Individual Measurement Epochs

3.2 Deformation analysis with descriptive deformation models

3.3 Deformation analysis with cause-response deformation models

Conclusion

References