



Код: 10765

M. Dziendzikowski, K. Dragan

## Damage Size Estimation with Active Piezo-sensor Network

Дрезден, Германия, 2012 год

7 стр; формат: 23,5 x 16 см; библиографический список: 17 единиц

In this paper an approach to damage size estimation based on algorithms adjusted to the damage localization is presented. In particular we propose the so called averaged damage indices based on selected signal characteristics. Covariates for damage size estimation models are derived from them via dimensional reduction methods like Principal Component Analysis (PCA) or Linear Discriminant Analysis (LDA) scaling. The indices proposed are designed to be less dependent on the damage localization and thus can be used in damage size assessment. Based on the emerged damage indices a model of system self diagnostics and several damage size estimation models are presented. The efficiency of those models is verified with cross-validation technique and data collected from fatigue tests of helicopter main rotor blade spar.

Доклад. 6-я Европейская конференция по мониторингу технического состояния сооружений, 2012. Редакция Кристиана Боллера.

**Ключевые слова:**

### Содержание.

Abstract

Introduction

Averaged damage indices

Damage size estimation

Summary