



Код: 10575

A. Mita, Y. Nakamura, M. Watakabe

## Assessment of a Tall Building with Active and Passive Vibration Control Devices

Издательство DEStech Publications, Lancaster, 2010 год

6 стр; формат: 23,5 x 16 см; библиографический список: 4 единиц  
ISBN: 978-1-60595-024-2

We propose two assessment methods to evaluate the performance of a tall building with active mass dampers and passive dampers. The first method utilizes the interpolation of modal response to obtain the drift response for all stories. The spline interpolation method is selected as interpolation tool among many candidates for its easiness and flexibility. The method is tested using a 9-storey building model. The drift response estimated using this method is confirmed to fit well to the true response.

The second method for open and closed loop systems is based on subspace identification method. In addition, identifiability of the system is carefully considered when it is applied to a building with active mass dampers. The method is tested for the 37-storey steel building with two mass dampers. It is revealed that the AMDs add about 5% additional damping values to the original structural system when the building subject to M6.5 earthquake.

**Ключевые слова:**

**Содержание.**

Assessment of a Tall Building with Active and Passive Vibration Control Devices