A Primary Study on Health Monitoring and Warning System for Power-Transmission Towers

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Abstract

The safety and stability of the steel towers strongly influences the reliability of power supply of transmission lines in Taiwan. These steel truss towers are composed of suspension towers, strain towers and terminal towers. The identification of structural damage is essential purpose of structural health monitoring for these towers. The behaviors in healthy towers and damaged towers have to be studied at very beginning, and the maximum capacity of tower in each-type has to be assessed carefully type by type. The warning system could be studied and established primarily by applying the on-line recursive and identification technique.

Biography

Prof. Ching-Churn Chern is a professor emeritus in Department of Civil Engineering at National Taiwan University. He received his B.S. and M.S. degrees in Civil Engineering from National Taiwan University in 1960 and 1964, and another M.S degree in Structural Mechanics from Northwestern University, USA in 1976. His research interests are in the areas of structural hazards mitigation, structural health monitoring, and structural seismic capacity assessment.