WALMER ENERGY

Quality of Wind-Resistant Solar Containers for Bridges

Overview

Can wind tunnels be used for wind engineering research of bridges?

To overcome the limitations of the existing experimental methods (i.e., wind tunnel test and in-situ measurement) for wind engineering research of bridges, a new experimental method is proposed, i.e., studying the wind-resistant performance of bridges based on large-scale deck sectional models and full bridge aeroelastic models in natural wind.

How does wind affect the performance of bridges under different wind conditions?

The wind-induced responses of bridges under different wind conditions can be fully studied. It is convenient to study the wind-induced cable forces and the effect of cable failure on the overall wind-resistant performance of the bridge. It is convenient to carry out experiments to study the combined effects of wind and rain.

What are the experimental bases for Bridge wind engineering of Dalian University of Technology?

The Outdoor Experimental Bases for Bridge Wind Engineering of Dalian University of Technology as well as three full bridge aeroelastic models and a large-size steel tower (for deck sectional model and cable aeroelastic model tests) are introduced, and the extensive possible research items are listed.

What are the advantages and disadvantages of large-scale model test in natural wind?

Advantages and disadvantages of large-scale model test in natural wind The scaling ratio of the model is no longer limited by the wind tunnel size, so that the fabrication accuracy can be increased and the Reynolds number effect can be reduced. The electric energy that consumed in wind tunnel test can be saved.

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