Photovoltaic support wind vibration coefficient

An analysis of the wind-induced vibration responses of the flexible PV support structures was conducted. The results indicated that the mid-span displacements and the axial forces in the ...

For single-row, single-layer flexible PV support structures, a recommended wind vibration coefficient range of 1.85-1.99 is proposed. The structural design should consider both the vertical ...

The wind-induced vibration caused by wind loads is one of the main reasons for the failure of PV supports, so the research focus is not only to improve the power generation efficiency of ...

Secondly, the wind-induced vibration of PV supports is studied. Finally, the calculation method of the wind load on PV supports is summarized.

Finally, the wind-induced vibration coefficient for both displacement and support reaction in the FCSPS is quantitatively evaluated. The results indicate that as initial pre-tension increases, the natural period ...

In this study, a series of two-way fluid-structure interaction (FSI) coupling numerical simulations are conducted to investigate the effect of ground anchors on the wind-induced vibration ...

These findings provide insights for wind-resistant design optimization of flexible PV supports.

To investigate the wind-induced vibration characteristics of photovoltaic array tracking supports, this study uses the harmonic superposition method to simulate pulsating wind time series and, combined ...

More study is needed for "flush mounts" parallel to the roof. For reference, see "Wind Loads on Rooftop Photovoltaic Panel Systems Installed Parallel to Roof Planes," published at the 2016 SEAOC ...

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