عنوان مقاله:

Investigating Winglet Effects on Natural Frequency ofWind Turbine Blade

محل انتشار:

پانزدهمین کنفرانس بین المللی نوآوری و تحقیق در علوم مهندسی (سال: 1402)

تعداد صفحات اصل مقاله: 5

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خلاصه مقاله:

Increasing the efficiency of renewable systems is oneof the important topics in energy research. Wind energy isextremely popular among researchers due to its advantages. Theefficiency of wind energy systems is divided into different typessuch as aerodynamic, mechanical and electrical. One of themethods used to increase the aerodynamic efficiency of windturbines is to add a winglet to the end part of the wind turbineblades. This simple tool affects the natural frequency of the vanedue to unbalance. The purpose of this article is to investigate theeffects of adding a winglet on the natural frequency of the blade.The simulation results showed that the winglet reduced thevalue of the .natural frequency of the wind turbine, and thiseffect is more visible in higher modes

کلمات کلیدی: