

Title: The role of wind deflector in wind turbines

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The deflector was utilized to block the wind blowing the front of the returning blade and to direct it to the advancing blade in order to reach the maximum performance of the Savonius turbine. ...

Abstract : The present study mainly focuses on a new design of a deflector by utilizing a rotating cylinder to augment the overall performance of the drag-type Savonius turbine.

The present study aims to improve the overall performance of a drag-type wind turbine by using a cylinder deflector with a wake splitter plate to manage and mitigate the detrimental effect of ...

This study aims to improve the performance of vertical shaft wind turbines by creating a new design combination of Darrieus and Savonius turbines with deflectors to produce CP ...

In the current study, a 2D transient model, have been investigated to compare and optimize the Darrieus wind rotor performance with and without deflector, in order to maximize the ...

Deflectors which will deflect the air from outer region into the region where wind turbines harness energy are employed. By doing so the flow gets accelerated and this in turn increases the ...

Wind energy utilization in urban areas revives the interests in vertical axis wind turbine (VAWT). An upstream deflector has demonstrated to increase the overall efficiency of two closely ...

This paper reviews various designs, experiments, and CFD simulations of wind deflectors reported to date. Optimization techniques for VAWTs incorporating wind deflectors are discussed in ...

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