

## Starting Torque Study of Darrieus Wind Turbine

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**Abstract :** The aim of our study is to project an optimized wind turbine of Darrieus type. This type of wind turbine is characterized by a low starting torque in comparison with the Savonius rotor allowing them to operate for a period greater than wind speed. This led us to reconsider the Darrieus rotor to optimize a design which will increase its starting torque. The study of a system of monitoring and control of the angle of attack of blade profile, which allows an auto start to wind speeds as low as possible is presented for the straight blade of Darrieus turbine. The study continues to extend to other configurations namely those of parabolic type.

**Keywords :** Darrieus turbine, pitch angle, self starting, wind energy

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