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Design and Development of Harmony Vertical Axis Wind Turbine

P V Deshmukh[1], Atharv Jadhav[2], Pratik Jadhav[3], Ganesh Khandalkar[4], Tejas Lalikar[5]
Assistant Professor, Department of Mechanical Engineering[1]
Students, Department of Mechanical Engineering[2-5]
AISSMS College of Engineering, Pune, Maharashtra, India

Abstract: *The Harmony Wind Turbine (HWT) is a Vertical Axis Wind Turbine (VAWT) designed to harness the clean and fast energy of wind. Its propeller-like blade configuration ensures rotation regardless of wind direction. To prevent overheating in high winds, the turbine coil can be wrapped around to maintain speed. In this project, we developed a Harmony wind turbine with an anemometer for wind speed control. A 3D CAD model was created using Catia v5 software, and the turbine was manufactured based on design measurements. Tests were conducted to observe its performance at different speeds, and an anemometer was used to start the wind system only when wind speed exceeded a certain threshold, preventing turbine damage.*

Keywords: Energy production, Harmony wind turbine, Furling

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