

# Design and Testing of Vertical Axis Wind Turbine

P V Deshmukh<sup>1</sup>, Vikky Kale<sup>2</sup>, Vilas Wadje<sup>3</sup>, Nikita Waghole<sup>4</sup>, Avanti Waghmare<sup>5</sup>

Assistant Professor, Department of Mechanical Engineering<sup>1</sup>

Students, Department of Mechanical Engineering<sup>2-5</sup>

AISSMS College of Engineering, Pune, Maharashtra, India

**Abstract:** *This abstract introduces a novel approach to the design and implementation of a Vertical Axis Wind Turbine (VAWT) using PVC (polyvinyl chloride) pipes. The incorporation of PVC pipes in VAWTs presents unique advantages for renewable energy generation across various applications. This study focuses on investigating the feasibility of integrating PVC pipes into a VAWT specifically designed for highway applications.*

*The paper emphasizes the potential of VAWTs with PVC pipes for highway settings, providing a cost-effective, flexible, and sustainable solution for generating renewable energy. By utilizing PVC pipes as a key component in the turbine design, this approach offers numerous benefits such as affordability, availability, and ease of installation. Furthermore, PVC's durability and resistance to environmental factors make it suitable for withstanding the challenges of highway environments.*

*The primary objective of this study is to shed light on the possibilities and opportunities associated with VAWTs using PVC pipes. Through rigorous research and analysis, valuable insights into the performance, efficiency, and scalability of this design are anticipated. These insights will serve as a foundation for future research and development endeavors, fostering advancements in clean energy technologies and sustainable infrastructure.*

**Keywords:** Vertical Axis Wind Turbine, Design, Fabrication.

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