Visvesvaraya Technological University, Belgaum

A PROJECT REPORT

Aerodynamic Recumbent Bicycle

(Karnataka State Council for Science and Technology sponsored project)

Submitted in partial fulfilment of the requirements of

Bachelor of Engineering

In Automobile Engineering

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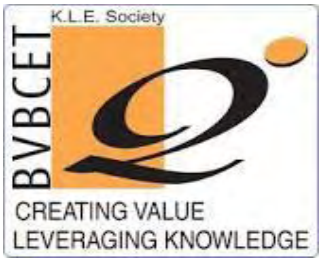

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Abstract

Walking, running and swimming are basic forms of human powered transportation that have been available to humanity since ancient times. With the advent of technology, human powered transportation has become more efficient, allowing humans to cover longer distances with less effort. Furthermore, although overshadowed by modern methods of transportation such as cars, airplanes, boats, and trains, human powered vehicles are popular for several motives. Human powered vehicles, such as the bicycle, are low cost, environmentally friendly, and benefit the health of the rider; making them attractive choices for transportation as well as leisure.

Within these requirements, we have designed the bicycle with the objectives of exceptional performance, practicality, and safety. The vehicle is a semi recumbent bicycle with an AISI 1018 frame and Lexan fairing. The choice of standard bicycle components will increase reparability and durability. The team has designed bicycle to have high stability at expected riding speeds. These features combine with a grocery bag-sized storage space and a hazard flag to make bicycle a highly practical vehicle. The team has held rider safety paramount in the design process.