DESIGN AND FABRICATION OF ONBOARD POWER GENERATION FOR EV (2-WHEELER)

Project Reference No.: *47S_BE_1114*

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Keywords:

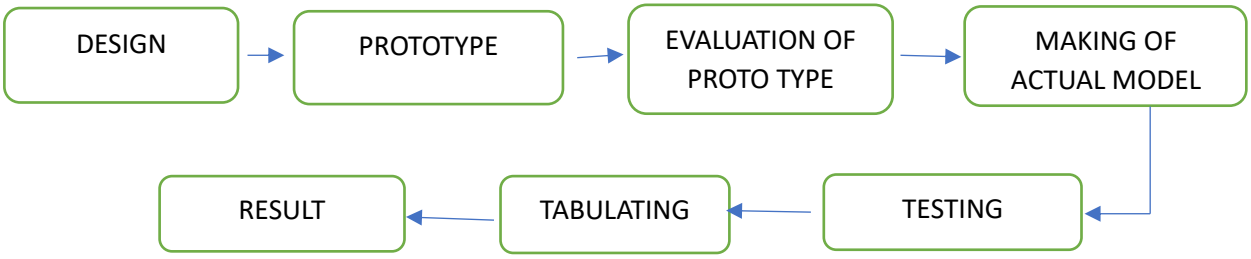
Electric vehicles, Range extension, stainable Transportation, regenerative energy

Introduction: As the present transportation systems are evolving towards the use of the electric vehicles, so in order to upgrade the systems in the electric vehicles we have decided to contribute our efforts in trying to improve the range of an electric vehicle using the regenerative systems. Earlier we have built a prototype design and have tested for the output as we have got a positive outcome in the prototype now, we have moved in actually creating a working model of the prototype which was tested earlier

Objective of the project:

1. To increase the range of the electric vehicles,
2. To reduce the emission,
3. To reduce the waiting time for recharging of the battery,
4. To upgrade the EV industries to the next step of evolution,

Methodologies:



DESIGN: The design of the ideology was created using the 2D drafting software

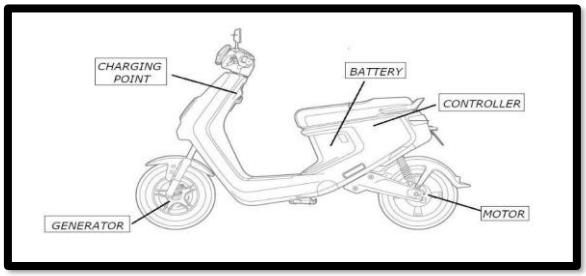


Fig. Final model of the project

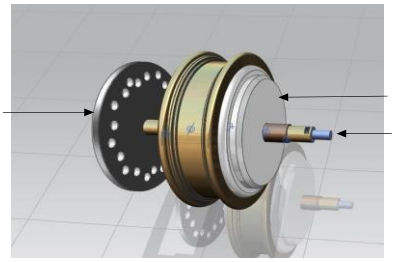


fig. Model of the generator

Prototype: In this phase we checked out the outcome of the generator to check its effeciency

Evaluation of the prototype: in this phase we evaluated the outcomes of the generator with the usage of the motor to determine if using this system is actually beneficial or not

Making of the actual mode: After evaluating the prototype as the results was in the positive side hence, we moved on to making the actual working model of the project

Tabulating: In this phase we had to tabulate the outputs of the project in order to create a graph

Result: It is observed that we have successfully used the free motion of the vehicle to generate energy which is used to recharge the battery of the vehicles up to 40%, the result can vary for different types of batteries and the motors used in the vehicle but overall if the correct type of generator is used the same amount of output can be achieved

Scope for future work:

1. To increase the efficiency of the generator
2. To make the generator more compact
3. To reduce the weight pf the generator
4. To reduce the cost of manufacturing the generator
5. To implement the idea in bigger vehicles