

Hybrid Cycle with the Combination of Flywheel and Gear System

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I am used three gears which is connected with the flywheel, and the flywheel transfer kinetic energy through the gears system which is makes the double boosting power of cycle.

All these steps will help to the all runner for using less energy and run fast.

2. MATERIAL&METHOD

Flywheel- I was used flywheel made of aluminum because flywheel mean determined by the maximum quantity of energy it can e stored per unit weight.

Diameter of flywheel -220mm (9.0")

Weight of flywheel-4.5 about

Rpm of flywheel-64,500rpm

Gears- Gear are used made by steel alloy. 3 gears are used in this system.

Cvt- C. v. t blocks are used at about 100 degree Celsius high pressure and friction condition so I used nylon 9T, PA9T

3. CONCLUSION

If I think about the previous research they all are using only flywheel and cvt with clutch but i used gears system it help

ABSTRACT

The mean of my hybrid cycle is that the flywheel connected with the back wheel with the help of chain mechanism and also the gear system connected with it. The main function of flywheel is to store the waste energy which arises due to break. Like heat energy, sound energy.

And the stored energy utilized by the help of gears as we required speed during riding.

Keywords: clutch, flywheel, chain

1. INTRODUCTION

Does not matter how much technology developed in our India and it increasing day by day, new research, new ideas, developed in early life...But still most of areas uses bicycle. And they use man power to run the bicycle. There's also a lot of children and old man.

I used a hybrid system which is recover the kinetic energy which is arise by applying brakes.

Flywheel use as an energy stored devise.

The energy is arising due to applying break. This energy stored in flywheel which is connected with the back wheel and also with the gears system by the help chain mechanism.

for boosting as the dual power and as our wish to change the gears according to speed.

I think this is the best idea for reducing the man power for running the bicycle because it give us dual boosting power which help in reducing man power within very less effort.

In this project a flywheel and gears based KERS system was designed. The product designed in this project is a hybrid of clutch; flywheel and gears based KERS systems. This system is expected to be cheaper than CVT based KERS system. Effective and efficient manufacturing procedures for the components of the KERS were also found out. Using FEA analysis the components are tested and modified to avoid failure. This project can guide anyone to fabricate his own KERS system for his bicycle very easily. It was found that all the components were safe under the extreme operating condition. Different types of KERS systems and their uses were also studied. It was found that flywheel can be used instead of battery to store and deliver energy efficiently. As use of flywheel in bicycle is a new concept, this field has a huge scope and wide range of implementation ahead.

