

Hybrid Two Wheeler

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Abstract: The project of fabricating a hybrid two wheeler was completed successfully. It strikes a right balance between fuel consumption and pollution control and can be optimized effectively in future generation vehicle. A hybrid motorcycle capable of mounting thereon a hybrid type drive unit, which does not project in a vehicle width direction and can be mounted even on a having a limited vehicle width, includes a power distributing device positioned between a generator and a motor, and a reduction device arranged rearwardly of the transmission device is journaled on a rear end of a central storage casing so that a rear end of the drive-wheel transmission device.

Key words: Hybrid Motorcycle • Power Distributing Device • Transmission Device

INTRODUCTION

At a time when the fuel prices are rocketing sky high, the daily running cost of a vehicle and its cost of ownership are hitting the roof and there is a dire need to protect our environment, alternative means of transport are few [1]. Electric vehicles are slow and expensive with limited range and hydrogen powered cars are decade away. The solution comes in the form of HYBRID VEHICLES, which in layman term refers to an automobile that runs A COMBINATION OF GASOLINE ENGINE AND AN ELECTRIC MOTOR.

The vehicle manufacturers fight the hike in fuel prices by banking on alternate fuel technologies like CNG and LPG, though this technology offers much lower running costs, has been accepted by the market very well, they involve huge cost of customization and also has adverse effects on the engine [2-4].

A majority of the population uses a two wheeler as a basic and cheap mode of transport for daily commute and the hike in fuel prices adversely affects this majority the most and as the alternate fuel technology has mainly been centered around the four wheel industry, the two wheeler has been left unseen in spite of the fact that fuel cell technology in 2-wheels is a distant dream in India and electric 2-wheelers are slow, expensive and plagued with limited range on full charge [5, 6].

So an electric hybrid two wheeler could be an ideal option for the people who use a two wheeler for daily commute as these vehicles will bring down the running costs by a considerable amount and the eco-friendly too without the disadvantage of having limited range on full charge.

Working of Hybrid System

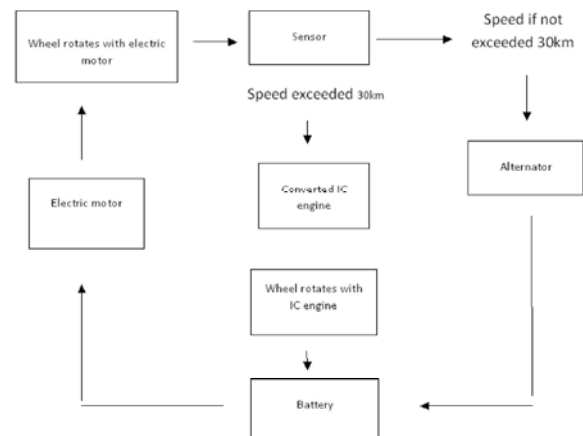


Fig. 1: Working of hybrid system

As shown in the figure vehicle runs with both electric motor and IC engine. Battery is used to supply the power to electric motor to start and to drive the vehicle up to the

speed limit of 30km/hr. When speed limit is exceeded 30km electric motor will disengage from the wheel and IC engine will get started to run the vehicle with the help of sensor. Whenever the speed gets down to 30km/hr electric motor will engage automatically to run the wheel. Run the wheel. In both case alternator which is connected to the wheel will re-generate the power ceaselessly so that power will be transmitted to battery to maintain the constant power.

CONCLUSION

The project of fabricating a hybrid two wheeler was completed successfully. It strikes a right balance between fuel consumption and pollution control and can be optimized effectively in future generation vehicle. A hybrid motorcycle capable of mounting thereon a hybrid type drive unit, which does not project in a vehicle width direction and can be mounted even on a having a limited vehicle width, includes a power distributing device positioned between a generator and a motor, and a reduction device arranged rearwardly of the transmission device is journaled on a rear end of a central storage casing so that a rear end of the drive-wheel transmission device.

REFERENCES

1. Gupta, R.B., Automobile Engineering.
2. Singh, Kirpal., Automobile Engineering Vol-2.
3. Ganeshan, V., Internal Combustion Engine.
4. Ravi Krishnan, A., Environmental Science and Engg.
5. Beranek, L.L., Noise Reduction.
6. www.googlebooks.com