

DESIGN AND FABRICATION OF REGENERATIVE BRAKING SYSTEM

Abstract : As in today's world, where there are energy crises and therefore the resources are depleting at a better rate, there's a requirement of specific technology that recovers the energy, which gets usually wasted. So, just in case of automobiles one among these useful technology is that the regenerative braking system. Regenerative braking system is an energy recovery mechanism that reduces the speed of a vehicle by converting its Kinetic Energy. into a form which will be either used for energy generation. By the help of Regenerative braking system in automobiles, we can recover the Kinetic Energy. of the vehicle to some extent that's lost during the braking process.

The converted Kinetic Energy is stored for future use or is fed back to the facility system of the vehicle. This energy is often stored during a battery or bank of capacitors for later use. Energy also can be stored with the assistance of a rotating flywheel which is one among the foremost inexpensive and effective method of storing and regenerating power. this invention provides energy-storing regenerative braking system by transmitting the flywheel force as a torque tending to oppose the forward rotation of a wheel on applying the brakes.

Keywords— *Regenerative Braking, Generator, Energy Crises, Energy Recovery, Capacitors.*

PROJECT OUTCOMES:

1. Process of recovering energy loss during Braking is learnt.
2. The system consists of 0.25 H.P motor, pulley and rope, gear module, and DC gear motor with gears in tips.
3. In this project wheel and Axle mechanism used.
4. Regenerative Braking system will produce the energy that can be used to charge the battery and run other equipment's in the vehicles.

SALIENT FEATURES:

Project Supervisor	: Ms. O.Y. Venkata Subba Reddy , Assistant Professor	
Academic year	: 2019 - 2020 (6 months)	
Project Budget	: Rs.10,000 /-	
Collaborators	: MRCET - Centre of Excellence in Engineering Design (CEED), Engineering Workshop	
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