**Abstract**

As in today’s world, where there are energy crises and the resources are depleting at a higher rate, there is a need of specific technology that recovers the energy, which gets usually wasted. So, in case of automobiles one of these useful technology is the regenerative braking system.

Regenerative braking is an energy recovery mechanism that slows a vehicle or object by converting its kinetic energy into a form that can be either used immediately or stored until needed.

Using regenerative braking system in automobiles enables us to recover the kinetic energy of the vehicle to some extent that is lost during the braking process.

The converted kinetic energy is stored for future use or is fed back into the power system of the vehicle. This energy can be stored in a battery or bank of capacitors for later use. Energy can also be stored with the help of a rotating flywheel which is one of the most inexpensive and effective method of storing and regenerating power. The present 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.

A brake-pad assembly, mounted concentrically with the hub of a ground-engaging wheel, is actuated upon braking to provide frictional engagement between the hub and clutch mechanism, while applying a decelerating torque to the wheel. The special braking mechanism is selectively held in position by a rider-controlled clutch mechanism, to accumulate energy over several braking events. Vehicles driven by electric motors use the motor as a generator when using regenerative braking and its output is supplied to an electrical load. The transfer of energy to the load provides the braking effect and regenerates power.