

GENERATION OF ELECTRIC POWER IN HYBRID/ELECTRIC VEHICLES USING REGENERATIVE BRAKING SYSTEM

U. SUDHAKAR¹ & K. VEERA RAGHAVULU²

¹Associate Professor, Marri Laxman Reddy Institute of Technology & Management, Hyderabad, India

²Assistant Professor, Marri Laxman Reddy Institute of Technology & Management, Hyderabad, India

ABSTRACT

The Regenerative Braking System of the hybrid/electrical vehicle is a key technology for improving the efficiency of the automobile by 20-40% depending on motor size. Regenerative braking contributes toward increasing the range of hybrid/electrical vehicles. Energy normally dissipated in the brakes is directed by a power transmission system to the energy store during deceleration. It helps to save fuel in hybrid vehicles and to reduce emissions of CO₂ and pollutants, particularly in urban traffic situations involving frequent braking and acceleration. In addition, using the generator for braking also reduces brake wear and the build-up of brake dust.

KEYWORDS: Hybrid/Electric Vehicle, Regenerative Braking System, Friction, Motor and Generator