

ABSTRACT

DC motor is the driving component as well as the most important component in electric cars, DC motor serves to move the wheels of the car using electrical energy that is converted into mechanical energy on the inside of the motor. Unlike fossil-fueled cars that use air pressure and gasoline to drive the pistons on the engine, electric cars have different speed control systems, that is by utilizing electromagnetic induction, by utilizing electric energy as a driving force, electric cars can function like cars with piston drives . One type of DC motor that can be used on electric cars is a type of brushless DC motor, this type of motor is the development of a type of brushed motor that has a difference in magnetic polarity change techniques on the coil motor, although only different in magnet polarity change technique of this type of motor has significant differences in the speed and durability of its components, with higher speed and torque, and robust component resistance of this type of motor is particularly suitable for electric cars. However, the deficiency in this type of DC motor is in the control of the speed is quite difficult because it requires a special electronic equipment and signal modulation techniques as the speed control techniques, therefore required speed control techniques such as PID to control the speed of DC motor at the desired speed, besides can help speed control on electric cars, speed control techniques using PID control systems can also be applied to autonomous cars so the car can control the speed independently.

Keyword: *electric car, DC Motor, controlling speed*