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There was a research through which was discovered a new magnetic material such as the neodymium magnet which, in fact, is an alloy of neodymium, iron and boron. In 2010 it was believed that it is the most powerful magnet on earth.

In 1831 Faraday discovered the means of Electromagnetic Induction, on the principle of which electric motors and generators are work. Their main difference is that the motor convert electrical current into mechanical force and generator convert mechanical force into electrical current.

Induction motors don’t require permanent magnet, brushes, commutator rings, position sensors. It is self started and has a simple and rugged construction unlike the DC motors, Stepper motors and BLDC motor (Brushless Direct Current Motor) and the great advantage of induction motors is that it has easy speed control. Induction motors are good to use in the elevators, cranes and electric cars.

Alternators are used to generate AC power and also might be called as synchronous generator. Electricity is produced by Electromagnetic Induction.

DC Generator has such advantages as simple design and operation, highly reliable, constant voltage achievement, easier speed control. DC generators are used in many applications like welding equipment, doosters, to charge batteries in siolar systems.