

Fig. 9.2. Separately excited generator.

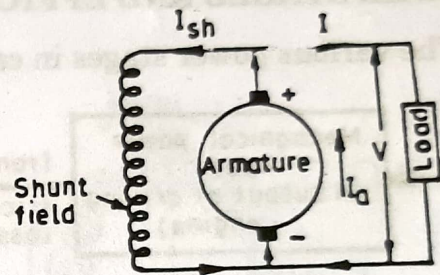


Fig. 9.3. Shunt wound generator.

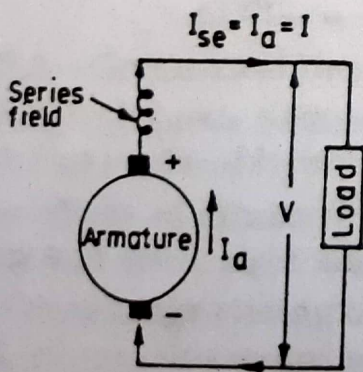


Fig. 9.4. Series wound generator.

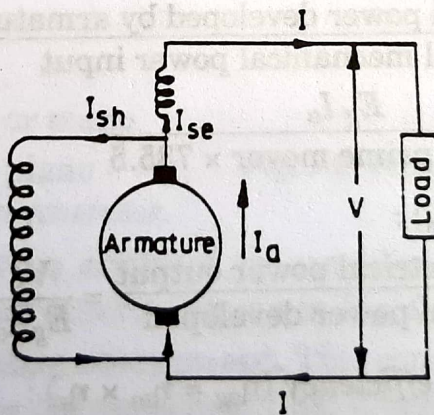


Fig. 9.5. Short shunt compound wound generator.

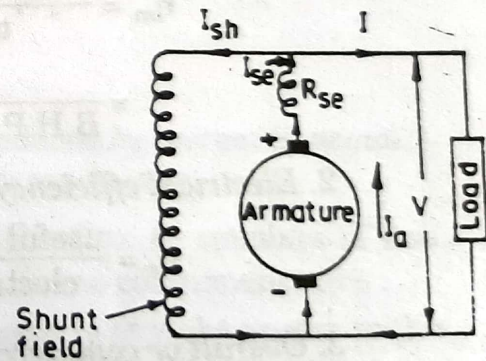


Fig. 9.6. Long shunt compound wound generator.

A Generator is a device that converts motive

Main Parts -

Stator - The main function of the stator is to provide magnetic fields where the coil spins.

Rotor - A rotor in a DC machine includes slotted iron laminations with slots that are stacked to shape an armature core.

Armature windings - Armature windings are in a closed circuit form and are connected in series to parallel for enhancing the sum of produced current.

Yoke - The external structure of the DC generator is known as yoke. It is made of either cast iron

or Steel. It provides necessary mechanical Power for carrying the magnetic-flux given through the Pole.

Pole - The function of a Pole is to hold the field winding. These windings are wound on pole and are either connected in Series or Parallel by armature windings.

Pole shoe - Pole shoe is mainly utilized for spreading the magnetic flux to avoid the field coil from falling.

Commutator -

A commutator works like a rectifier that change AC voltage to DC. with in the armature winding. It is designed with a copper segment, and each segment is protected from each other with the help of mica sheets.

Carbon Brushes — The electrical connections can be ensured between the commutator as well as the exterior load etc with help of brush.

field coil — coil are typically copper wire. Sometime magnet wire.

Slip ring — The slip ring collects the power from DC Generator through the static device called brush. Formally it is an electric transmission device that allows energy flow between two electrical rotating parts.