Special Electrical Machines

Repulsion Motor

Construction of Repulsion Motor:



Principle of Operation:

- A repulsion-induction motor is a single-phase motor with conventional stator winding and two windings in the rotor.
- At start, the repulsion winding is predominant, but as the motor speed increases, the squirrel cage winding becomes predominant.
- Transition from repulsion to induction is smooth since no switching device is employed.
- This motor is ideally suited for applications where low voltage is a problem or high starting torque's are required.

Disadvantages of Repulsion Motor

- Occurrence of sparks at brushes
- Commutator and brushes wear out quickly. This is primarily due to arcing and heat generated at brush assembly.
- The power factor is poor at low speeds.
- No load speed is very high and dangerous.

Application of Repulsion motors

- Because of excellent starting and accelerating characteristics, repulsion-induction motors are ideal for:
- Value Operators
- Farm Motor Applications
- Hoists
- Floor Maintenance Machines
- Air Compressors
- Laundry Equipment
- Mining Equipment

THANKS....

Queries Please...