STARTER

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STARTER OF 3 PHASE INDUCTION MOTOR

CONTENT:

- Necessity of starter
- Function of starter
- Methods of starting

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➢NECESSITY OF STARTER

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STARTING OF INDUCTION MOTOR

- For induction motors, the starting torque (LRT) is approximately proportional to the square of the starting current (LRA) drawn from the line. **$LRT \propto I^2$**
- This starting current is proportional to the applied voltage (V)
- Torque can also be considered to be approximately proportional to the applied voltage. **$LRT \propto V^2$**
- An induction motor will develop far too much torque when connected directly to the supply.

At the instant of start-up, there are some un-necessary effect on electrical and the mechanical components.

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UN-NECESSARY MECHANICAL EFFECTS

The sudden impact at start up on the load, followed by the rapid acceleration to full speed causes excessive wear on :-

- Belts and pulleys
- Gears and chains
- Couplings and bearings
- Cavitation in pumps etc.

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UN-NECESSARY ELECTRICAL EFFECTS

- A heavy current surge on the electrical supply which can be severe enough to cause voltage dips and flickering lights.
- Burning of contacts due to high currents which are many times the motor full-load current.

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