



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)



COIMBATORE-35

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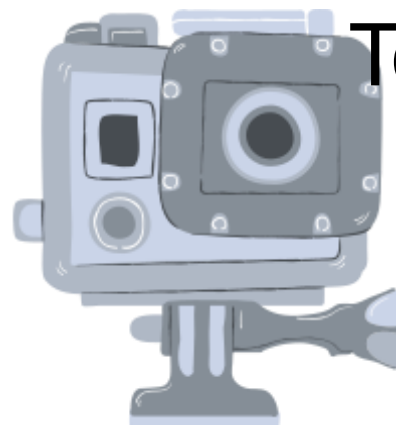
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

**COURSE NAME: 19EET207/ SYNCHRONOUS AND INDUCTION
MACHINES**

II YEAR / IV SEMESTER

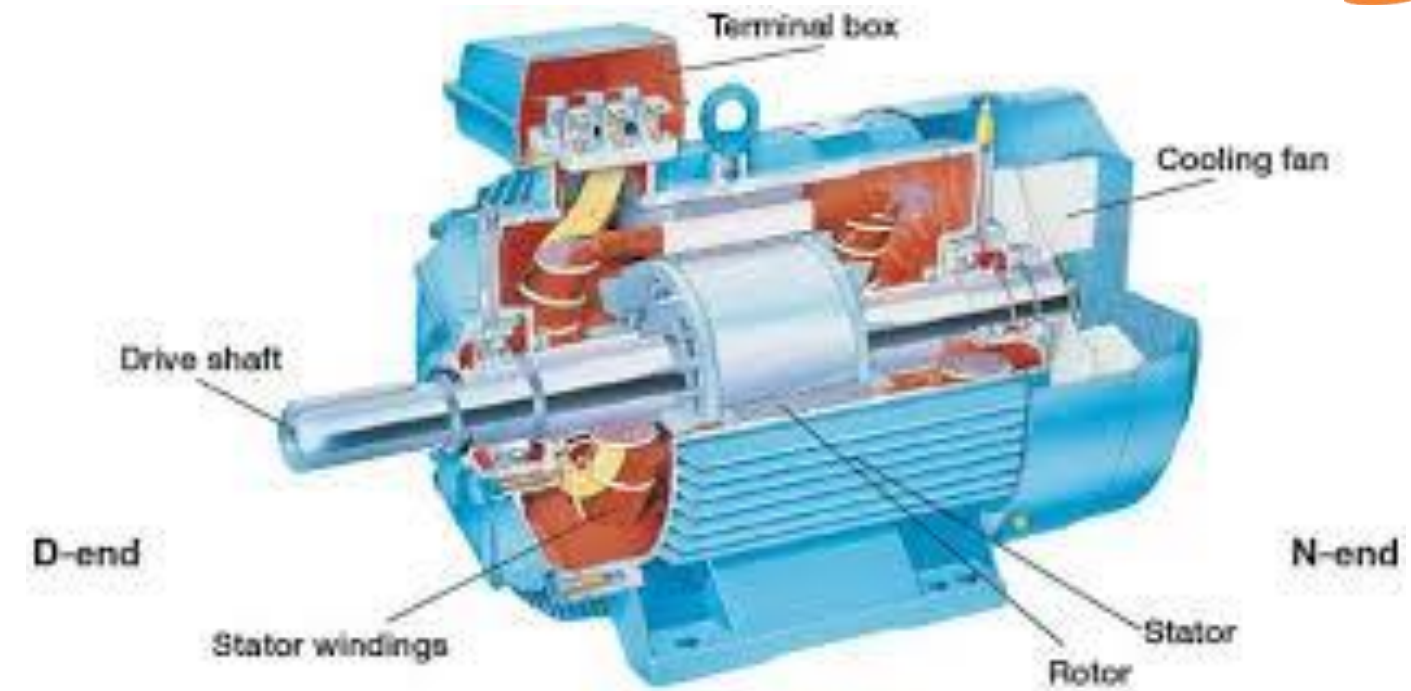
Unit 3 – THREE PHASE INDUCTION MOTOR

Topic 1: Constructional details-Types of rotors





GUESS THE TOPIC NAME...



3 Phase Induction Motor





INDUCTION MOTOR-CONSTRUCTION

An induction motor has two main parts

– **a stationary stator**

- consisting of a steel frame that supports a hollow, cylindrical core
- core, constructed from stacked laminations (why?), having a number of evenly spaced slots, providing the space for the stator winding

– **a revolving rotor**

- composed of punched laminations, stacked to create a series of rotor slots, providing space for the rotor winding
- one of two types of rotor windings
- conventional 3-phase windings made of insulated wire (wound-rotor) similar to the winding on the stator
- aluminum bus bars shorted together at the ends by two aluminum rings, forming a squirrel-cage shaped circuit (squirrel-cage)

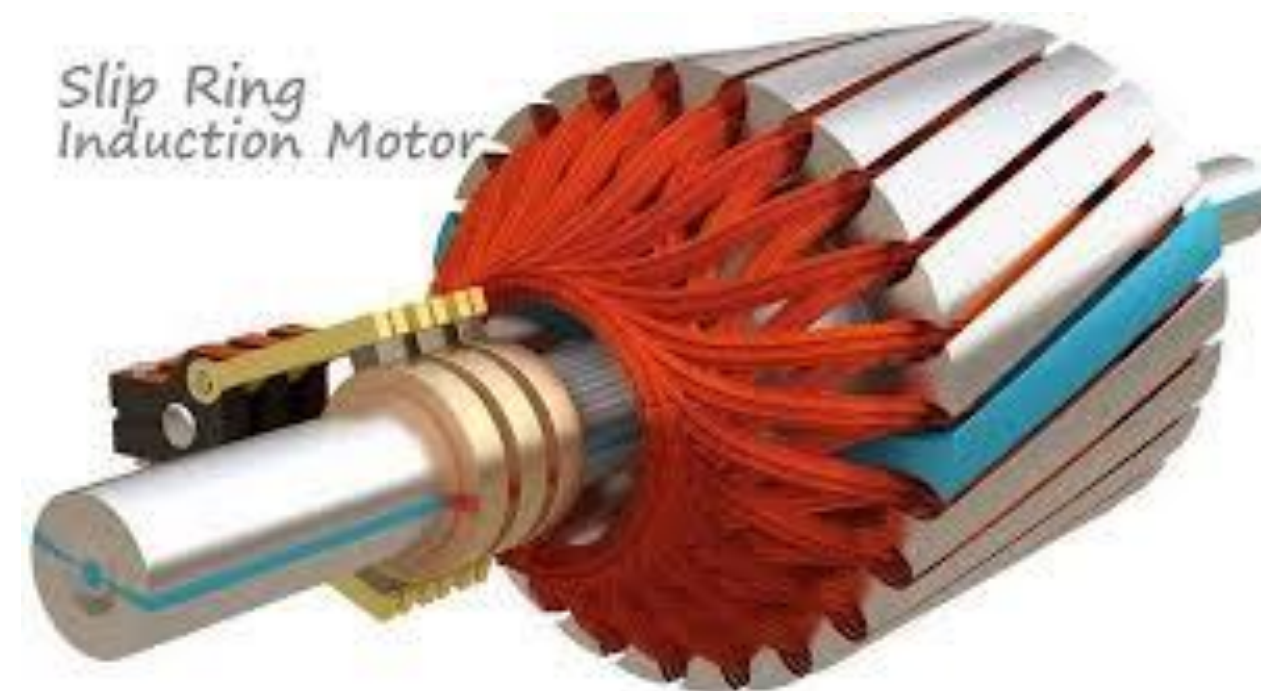




INDUCTION MOTOR: Rotor

Two basic design types depending on the rotor design

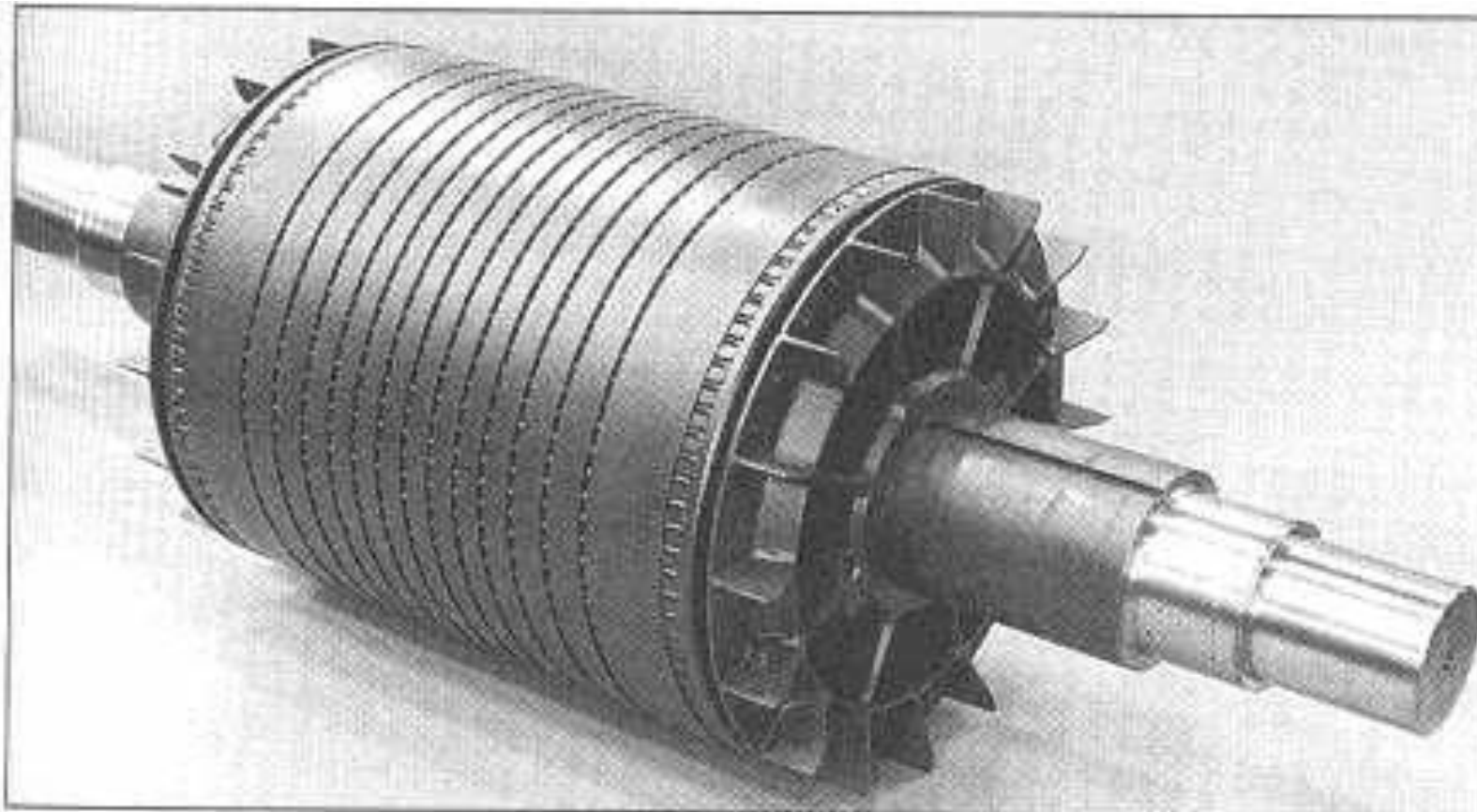
- **squirrel-cage**: conducting bars laid into slots and shorted at both ends by shorting rings.
- **wound-rotor**: complete set of three-phase windings exactly as the stator. Usually Y-connected, the ends of the three rotor wires are connected to 3 slip rings on the rotor shaft. In this way, the rotor circuit is accessible.



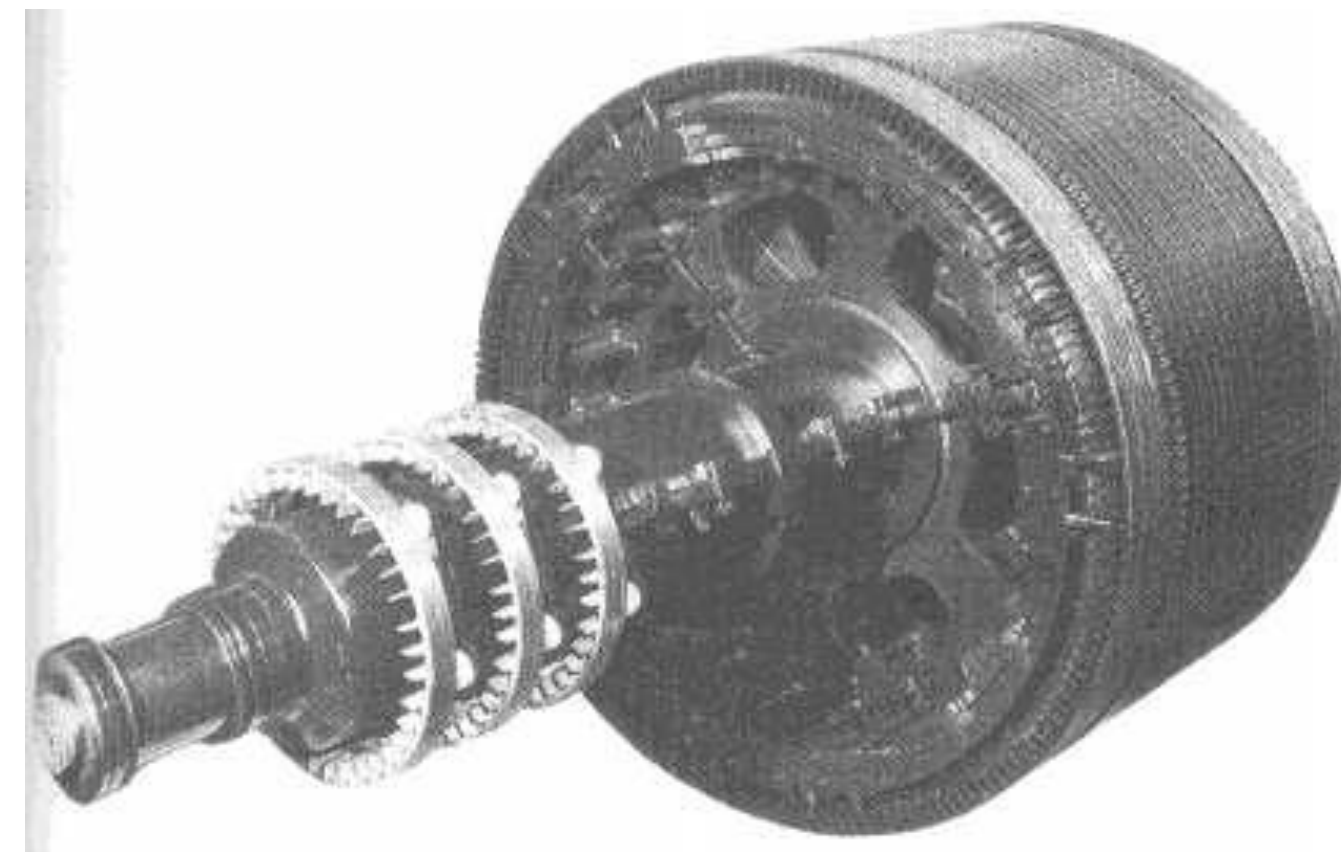


Field Excitation and Exciters

Squirrel cage rotor



Wound rotor





SUMMARY

Construction, Types of Rotors of Induction Motors



KEEP
LEARNING..
Thank u

SEE YOU IN NEXT CLASS