



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

COIMBATORE-35

Accredited by NBA-AICTE and Accredited by NAAC – UGC with A+ Grade

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

COURSE NAME: 16EE214/ELECTRICAL MACHINES AND DRIVES

III YEAR / VI SEMESTER

UNIT 1- OVERVIEW OF ELECTRICAL DRIVE

**Topic 3– Factors
influencing the choice of electrical drives**



SUCCESSFUL STUDENT

Positive
Attitude

Professionally
Groomed

Socially
Interactive

Technically
Skillful



FACTORS INFLUENCING THE CHOICE OF ELECTRICAL DRIVES

- Nature of electric supply
 - Whether AC or DC supply is to be used for supply
- Nature of the drive
 - Whether the particular motor is going to drive individual machine or a group of machines



costs

- Capital and running cost
- Maintenance requirement
- Space and weight restrictions
- Environment and location





- **Nature of load**

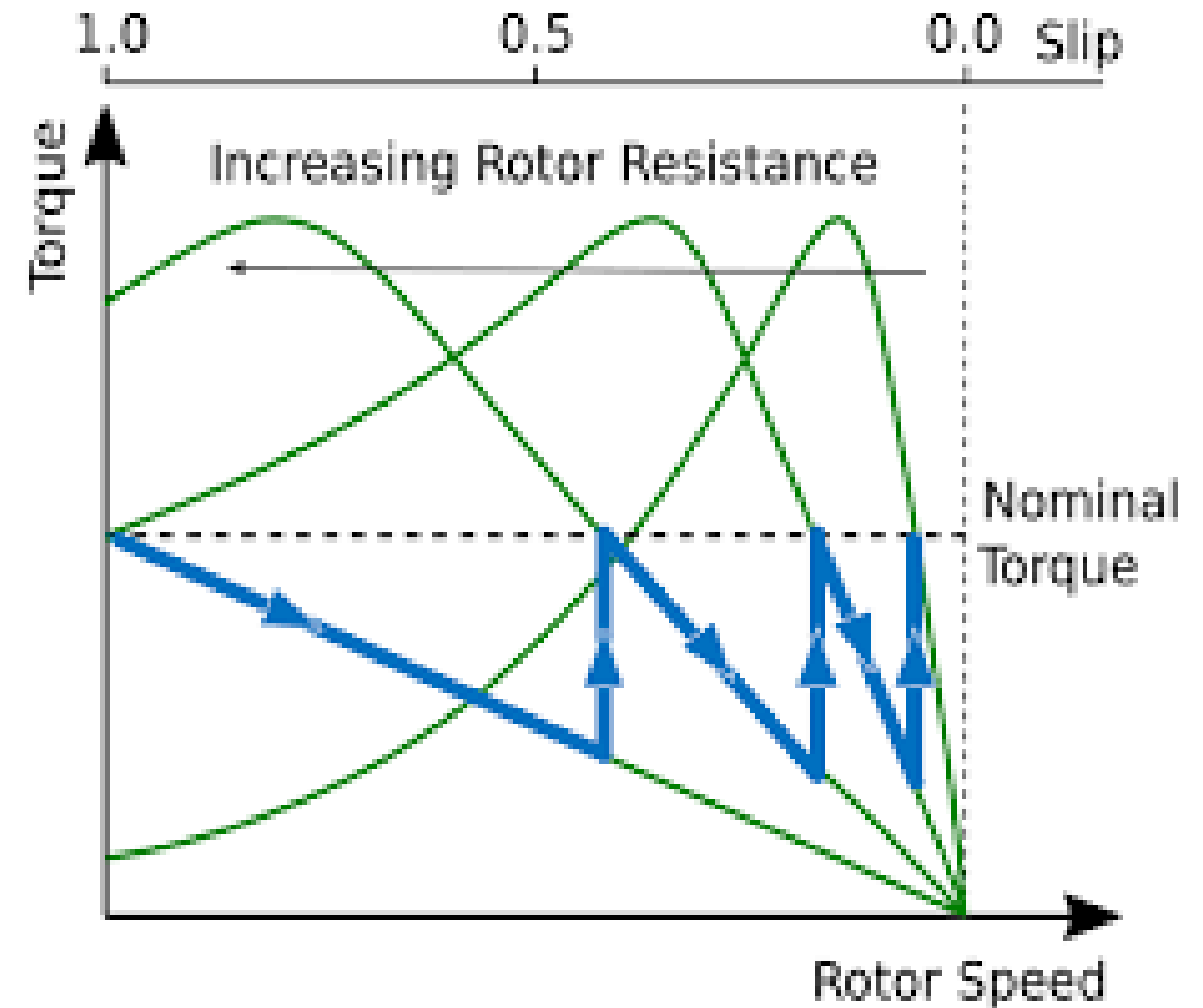
- Whether the load requires light or heavy starting torque
- Whether load torque increases with speed remain constant
- Whether the load has heavy inertia which may require longer straight time





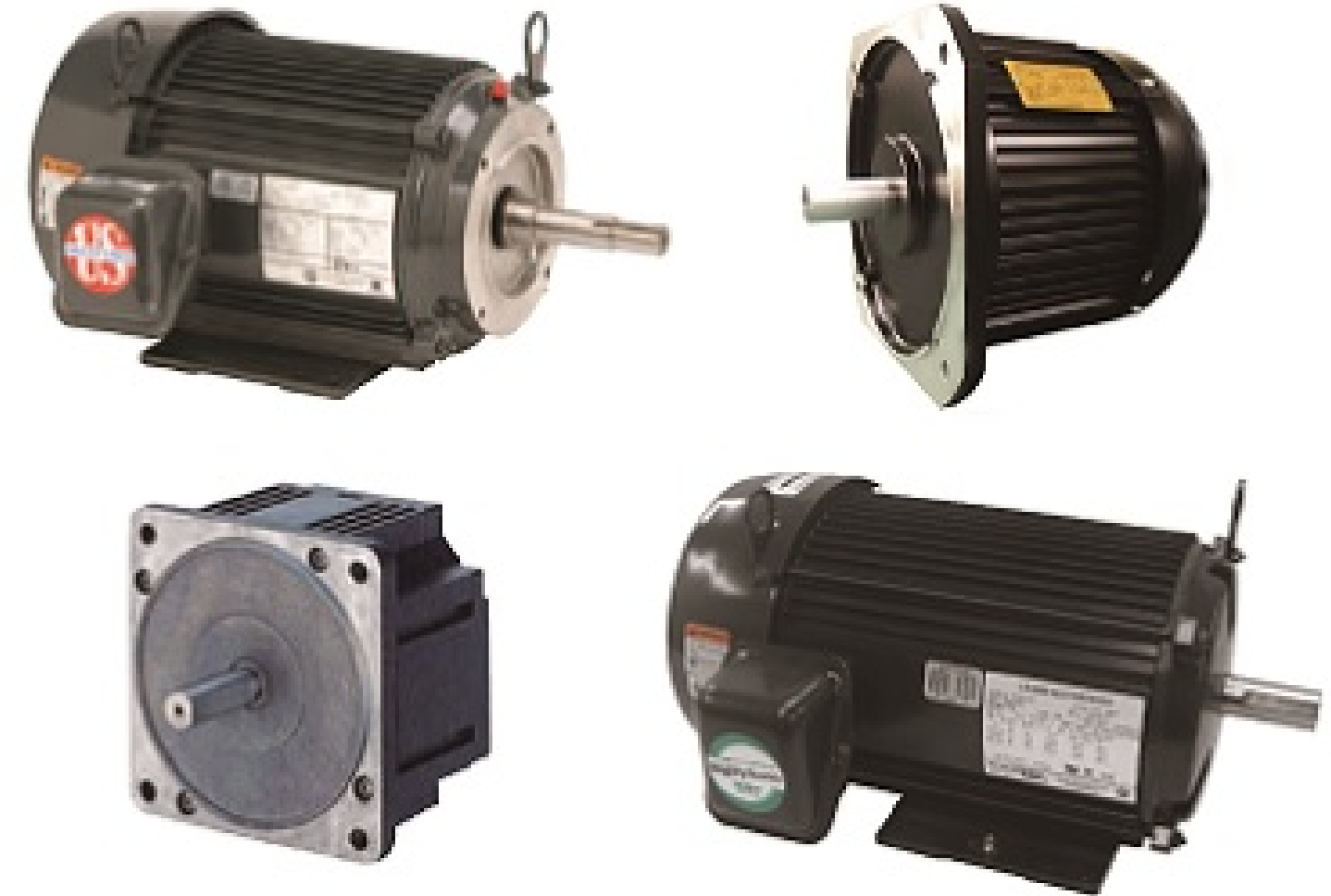
Electrical characteristics of motor

- Starting characteristics,
- Running characteristics,
- Speed control and
- Braking characteristics





- Size, rating and duty cycle of motors
 - Whether the motor is going to the operator for a short time or whether it has to run continuously intermittently or on a variable load cycle





Mechanical considerations

- Type of enclosures, type of bearings, transmission of drive and Noise level.
- Due to practical difficulties, it may not possible to satisfy all the above considerations.
- In such circumstances, it is the experience and knowledge background which plays a vital role in the selection of the suitable drive.



ASSESSMENT



REFERENCE



- D.P.Kothari and I.J.Nagrath, “Basic Electrical Engineering”, Tata McGraw Hill publishing company ltd, second edition, 2007
- S.K.Pillai, “ A First Course on Electrical Drives” New age publishing Ltd, 1989. (UNIT I, IV,V)



THANK YOU!!