SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

COIMBATORE-35

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

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

COURSE NAME: 23EEB210/ELECTRICAL MACHINES AND DRIVES

Unit I – Classification of Electrical Drives

CLASSIFICATION OF ELECTRICAL DRIVES

1.Based on Load and environment condition

2.Based on Mode of operation

3.Based on controlling Action

4.Based on number of Machines

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1.Based on Load

- Continuous
- Short time
- Intermittent
- Constant or variable
- Positive or Negative

1.Based on Environment

- Temperature proof
- Humidity
- Dust and Dirty proof
- Vibration and Shock proof

2.Based on Mode of operation:

- Continuous duty cycle
- Intermittent duty cycle
- Short time duty cycle

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3.Based on Controlling Action

- Manually controlled
- Semi automated controlled
- Fully automatic controlled

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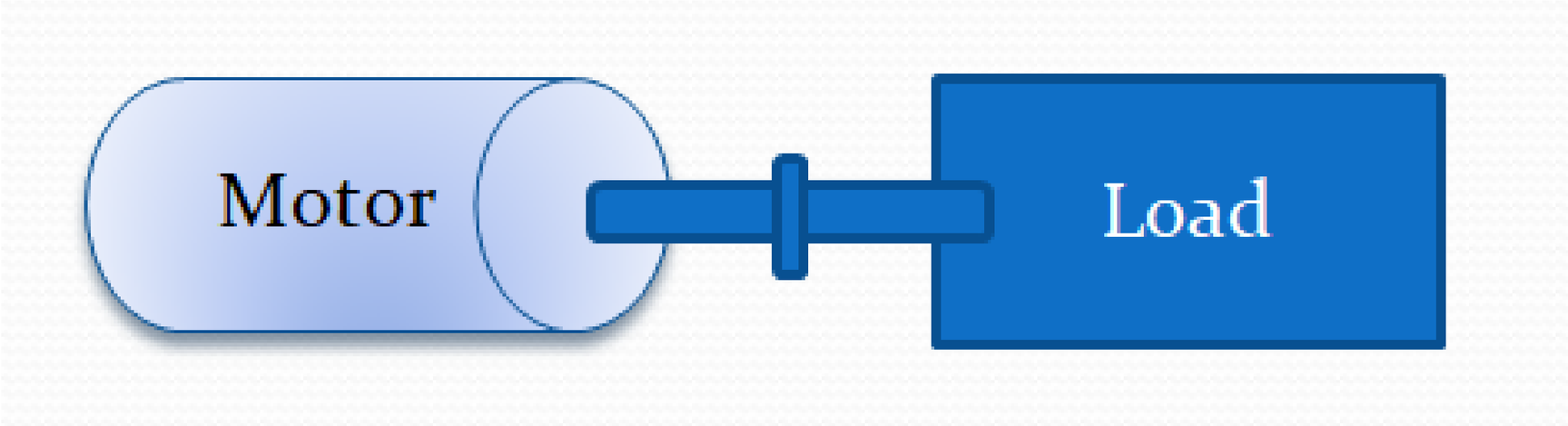
4.Based on Number of machine

- Individual drive
- Group drive
- Multi motor drive

INDIVIDUAL DRIVE SYSTEM

Only one load is carried with single electrical drive



Advantages:

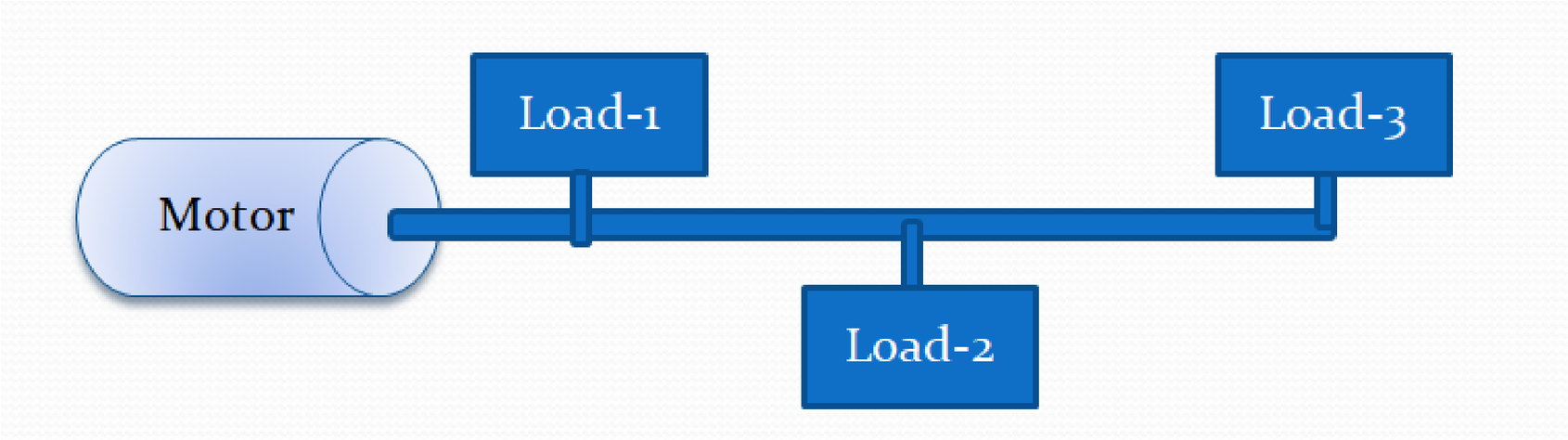
- Does not depend on other drives
- Better efficiency
- Neat appearance, Cleanliness and safety

Disadvantages:

- More Cost

GROUP DRIVE SYSTEM

More than one load is carried with single electrical drive



Advantages:

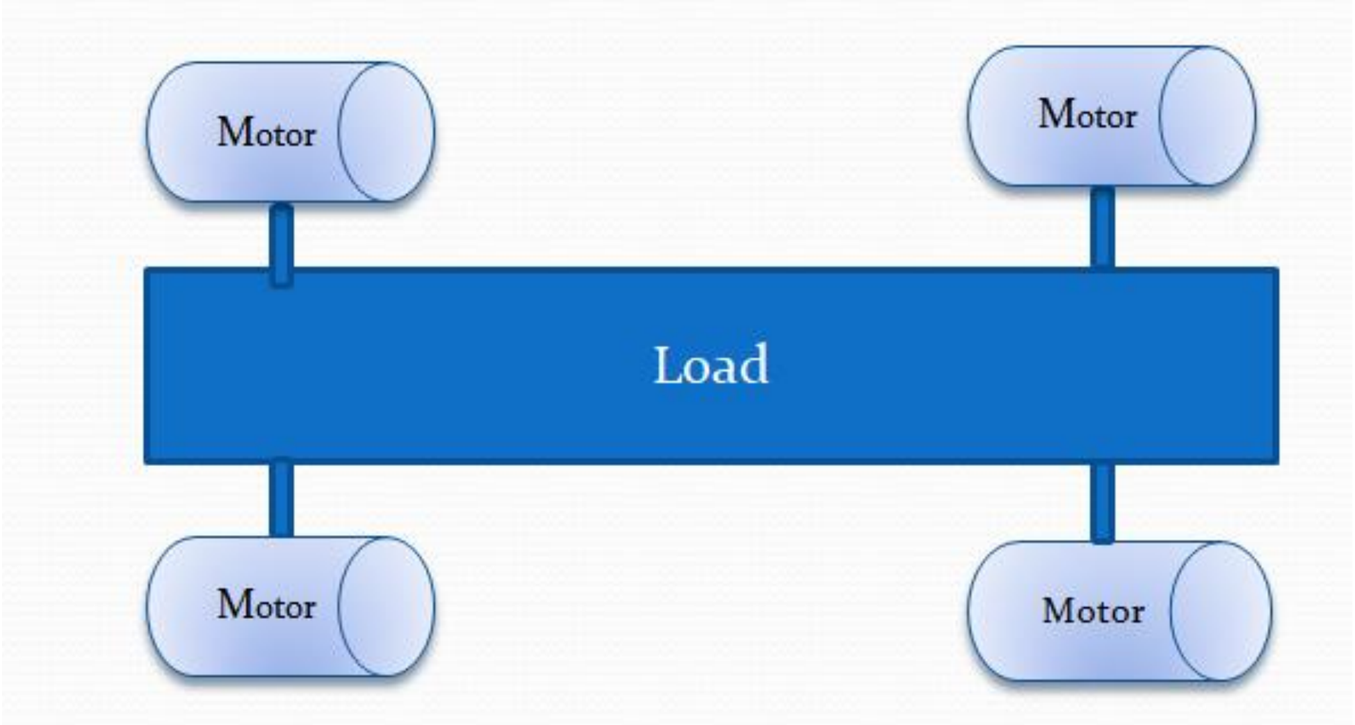
- Single drive enough to drive multiple load
- So installation cost and cost of one single large motor will be much less than a number of smaller motors totalling the capacity.

Disadvantages:

- Less Efficiency
- Less power factor
- During fault condition, problem rectification is difficult

MULTI MOTOR DRIVE SYSTEM

More than one motor is carried with single load



Advantages:

- Simple in construction
- More in economical
- More convenient
- More Flexible
- Easily controllable
- Less Noisy

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KEEP
LEARNING..

Thank u

SEE YOU IN NEXT CLASS

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