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

UNIT III: GEARING MECHANISM

TOPIC: **Geared Motor Applications**

Introduction

- The gears are a type of mechanical element whose teeth are cut around a cylindrical or conical surface with the same space.

- It is used for the rotation and transmission of force from the drive shaft to the driven shaft when coupling a pair elements.

- The gears can be classified into

1. Spiral Gear
2. Cycloid and Tro-choidal Gears

Application of Helical Gear:-

1.Fertilizer industries
2.Printing industries
3.Earth moving industries
4.Rolling Mill
5.Power and Port Industries
6.Textile Industries
7.Plastic Industries
8.Automobile Gearboxes
9.Machine Tool Gearboxes

Helical Gear

Spur Gear

- A gear with a cylindrical pitch surface is called a spur gear.
- Spur gears are cylindrical gears that belong to the group of parallel shaft gears and have straight and straight teeth parallel to the shaft.
- Spur gears are the most used gears that can be achieved with high precision with relatively simple production processes.

Application of Spur Gear:-

- Metal Cutting Machine
- Power Plant
- Marine Engines
- Mechanical Clock and Watches
- Fuel Pumps
- Washing Machine
- Gear Motors and Gear Pumps
- Rolling Mill
- Rack and Pinion mechanism

Spur Gear

Application of Bevel Gear:-

- Printing Machine
- Agriculture
- Bottling
- Material Handling
- Steering
- Differential Drives
- Hand Drill

Bevel Gear

Application of Internal Gear:-

Internal gears are often used in applications involving planetary gear drives and gear couplings.

Internal Gear

Application of Worm Gear:-

- Gate Control Mechanism
- Hoisting Machines
- Automobile Steering Mechanism
- Lifts
- Conveyors
- Presses
- Speed Reducer

Worm Gear

Worm Gear

- The screw shape that is cut on the shaft is a worm, the mesh gear is a helical gear, and the axes that do not intersect are called worm gears.

- Worm gears are gears which are widely used for transmitting power at high velocity ratios between non intersecting shafts that are generally, but not necessarily at right angles.

Worm Gear

- It is mostly used as a speed reducer, which consists of worm and worm wheel or gear.
- The worm gear is similar to a helical gear with a face curved to conform to the shape of the worm.

RECAP….

…THANK YOU