

Experiment No. 29

Statement:

Analyze different parts of Transmission system

Desired Learning Objectives

2. This practical aim to identify and use different types of transmissions. After going through this practical, trainees would be able to identify and use different types of transmissions.

Equipment / Material Required

3. Required apparatus are: -

- (a) Different types of Gears (Spur, Bevel, Helical, epicycle & worm).
- (b) Chain and sprockets.
- (c) Belt (V belt, flat belt, teeth belt) of different types.
- (d) Pulleys and cable of different size & shape.
- (e) Drilling machine for demonstration of belt and pulley.
- (f) Lath machine.

Safety Precautions

4. During the practical, trainees are to make sure following precautions: -

- (a) Always stand at safe place to inspect and operate transmissions system and do not wear loose clothes.
- (b) Operate the transmissions under supervision.
- (c) Ensure transmissions protecting cover is placed for safety.
- (d) Never interfere with transmission once it is in operating condition.
- (e) Take care of lubrication part of transmission.

Procedure

5. The following procedure during practical are: -

(a) **Different Types of Gears.**

- (i) Show different types of Gears like spur, Bevel, Helical, epicycle & worm gears.
- (ii) Show the teeth type i.e. internal and external.

- (iii) Open the back panel of Lath machine for analyzing spur gear trains.
- (iv) Carry out security check of machine and ensure its safety for operation.
- (v) Operate the lath machine and experience movement of gear and their transmission of movement to its corresponding shaft and accessories.
- (vi) Stop the Lath machine and close its back-end door.
- (vii) Switch off the supply source and safe the machine accordingly.
- (viii) Appended below is a typical example of transmission system.



- (b) Trainees are tasked to see the different types of gears and fill up the following blank space: -
 - (i) Specimen No 1 Teeth type. gear type.....
 - (ii) Specimen No 2 Teeth type. gear type.....
 - (iii) Specimen No 3 Teeth type. gear type.....
- (c) **Belts & pulleys.**
 - (i) Observe different types of belt and pulleys placed on practical bay. Define the purpose of each belt. Show Chain and sprocket as transmission system accessories.
 - (ii) Move towards electrical drilling machine in PL-11, Carry out security check of machine and ensure its safety for operation.
 - (iii) Switch on the machine and observe the driver and driven pulleys and note its speed of rotation.
 - (iv) Switch the drilling machine and wait for its complete stop.
 - (v) Change the size of driver or driven pulleys by changing position of belt.

- (vi) Again, carry out security check of machine and ensure its safety for operation.
 - (vii) Switch on the machine and observe its speed of rotation and change in speed occurred after change of pulley's size.

Conclusion: