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Question:

**Explain the phenomenon of slip and creep in a belt drive.
State its effect on velocity ratio.**

Answer:

Slip of the belt: A firm frictional grip between belt and shaft is essential. But sometimes it becomes insufficient. This may cause some forward motion of the belt without carrying the driven pulley with it. This called as slip of the belt. It is expressed as a percentage.

Effect on velocity ratio: Result of belt slipping is to reduce the velocity ratio of the system.

Creep in belt drive : When the belt passes from slack side to tight side, a certain portion of the belt extends and it contracts again when the belt passes from tight sight to slack side. Due to these changes in length, there is a relative motion between the belt and the pulley surfaces. This relative motion is called as creep.

Effect on velocity ratio: The total effect of creep is to reduce slightly the speed of the driven pulley or follower.
