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SLIP & CREEP APPARATUS (EE-1591)

This apparatus is useful for measurement of power transmitted for various input power conditions with varied belt tension. Belt slip or creep also can be measured. The apparatus consists of a variable speed D.C. motor, driving pulley and driven pulley of equal diameters. The pulley are mounted on input shaft (motor shaft) and output shaft. The driven pulley can slide on the base only with bearing block to change the initial tension in belt. Brake drum is mounted on the output shaft, which helps to measure power output. The motor speed is varied by Thyristor Control D.C. drive. A double channel digital speed indicator indicates driving and driven pulley speeds. With the help of Stroboscope (not in the scope of supply) it is possible to demonstrate the slip of belt on driving and driven pulley.

SCOPE OF EXPERIMENTATIONS:

- To measure power transmitted with varied belt tension.
- To measure percentage slip at fixed belt tension by varying load on the brake drum and plot the graph (T1-T2) v/s percentage slip i.e. “Slip Characteristics”.
- To study creep of the belt.

UTILITIES REQUIRED:

- Power supply : 220 V AC, Single Phase
- Floor Area : 1.5 x 2m.

TECHNICAL DETAILS:

- Motor : Variable speed DC Motor, 1 HP
- Pulleys : Driving & Driven pulleys of Equal Diameter (Flat Pulleys)
- Belts : Flat Belts of Fixed Length of Following Material
  Fabric Belt
  Canvas Belt
- Loading Arrangement : Rope Brake arrangement is provided to load the system
- Speed Control Unit : Thyristor controlled DC Drive for varying the speed of DC motor.
- RPM Measurement : Digital RPM Indicator with proximity switch