The apparatus consists of a variable speed D.C. Motor, Driving pulley and Driven pulley of equal diameter. The pulleys are mounted on input shaft (Motor shaft) and output shaft. The driven pulley can slide on the base with bearing block to change initial tension in belt. Brake drum is mounted on output shaft helps to measure power output. The motor speed is varied by dimmerstat. A two channel RPM Indicator is provided to measure speeds of driven and driving pullies respectively.

Specifications:

1. D.C. Motor - 1 HP, 1500 RPM, variable speed.
2. Driving & Driven puilies of equal diameters.
3. Brake drum along with spring balance.
4. Fiat Belt of fixed length of following materials -
   (i)Fabric Belt
   (ii)Canvas Belt.
   (iii)Rubber Belt.
5. Belt tightening arrangement.
6. Speed Controller unit.
7. Two Channel digital RPM Indicator.
8. Stroboscope.

Experimentation:

1. To measure co-efficient of friction between pulley material and different belt materials.
2. To measure power transmitted with varied belt tensions and plotting graph of (T1 - T2).Tension Characteristics.
3. To measure percentage slip at fixed belt tension by varying load on brake drum and plot graph of (T1-T2) Vs.percentage slip.i.e. Slip Characteristics. Finding a creep zone from graph.
4. To measure belt slip speed and observe the limiting value float at constant speed when the slip just starts.

Service Required:

1. 230 V.A.C. stabilized power supply
2. Space -. 1.5m x 1.5 m.

Note: Specifications are subject to change.

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