

## JOURNAL BEARING APPARATUS (EE-1588)

The apparatus consists of a plain steel shaft excavated in a bearing and directly driven by a FHP Motor. The bearing is freely supported on the shaft and sealed at the motor end. The speed of the motor is controlled by the speed control unit. Ten equal-spaced pressure tapping around the circumference and four along the axis are provided and are connected to manometer by PU Tubing so that the pressure head of oil in all tubes can be observed at a time. The bearing can be loaded by attaching weights to the arm supported beneath it.

### SCOPE OF EXPERIMENTATIONS:

- To study the pressure profile of lubricating oil at various conditions of load and speed. on a journal bearing.

### UTILITIES REQUIRED:

- Electric supply
- 230 VAC, Single Phase.
- Bench area
- 1.5 x1.5 x 4m
- Tachometer to find out **RPM** of journal.
- Oil
- SAE 40 about 5Ltrs.

### TECHNICAL DETAILS:

- Journal : Diameter 50mm
- Bearing : Diameter 55mm
- Weights : 2 Kg.
- Motor : Variable speed FHP Motor
- Control Panel : For speed control of motor.
- Manometer : 14 Tubes.
- Oil recommended : SAE 40

