TOM-009 **JOURNAL BEARING TEST RIG**

RANGE OF EXPERIMENTS TO BE CARRIED OUT:

1. Determine the pressure distribution in the oil film of the bearing for various speed
2. Plot the Cartesian & polar pressure curves for various speeds.
3. Plot the Somerfield pressure curve for each speed.
4. Compare the mean load, due to the mean upward pressure on the projected & developed areas of the bearing with the total applied load

1, Camp's Corner, Nr. Narhari Hospital, Fatehgunj, Vadodara - 390 002, Gujarat, India.
Tell No. +91 265 750186, Cell No. +91 9727759429
info@fadaklabequipments.com

TECHNICAL DESCRIPTION:

It consists of a M.S. bearing mounted freely on steel journal shaft . This journal shaft is fixed directly on to a motor shaft. The speed of the D.C. Motor is finally controlled by a D.C. Dimmer stat. The journal bearing has equal spaced pressure tapings around its circumference & on the top side of the bearing. The two sides of bearing are closed with two M.S. Plates & sealed with a gasket packing to avoid leakage. Small balancing weights are provided to maintain the bearing in its normal position during the test run & while taking the readings. Both the weights can be adjusted freely along the rod. . Oil film pressures are indicated in a manometer board reading directly in head of oil. Clear flexible plastic tubes are clamped on the manometer board are connected to the tappings spaced around bearing, & thus permit the bearing to turn freely. The oil reservoir can be adjusted at required height & connected to the bearing by flexible plastic tube. From this reservoir oil enters the bearing through this plastic tube

DIMENSIONS AND WEIGHT :

Size :1.0 m.(L)x 1.0 m(W) X 2.5m (H)

Weight :Approx. 45 Kg

SERVICE REQUIRED :

230 v Ac Supply 50 Hz

Oil No.20 w 40 : 10 ltr

SCOPE OF DELIVERY:

1. Experimental Setup
2. Instructional Manual

OPTIONAL FACILITY: Data logging Facility

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