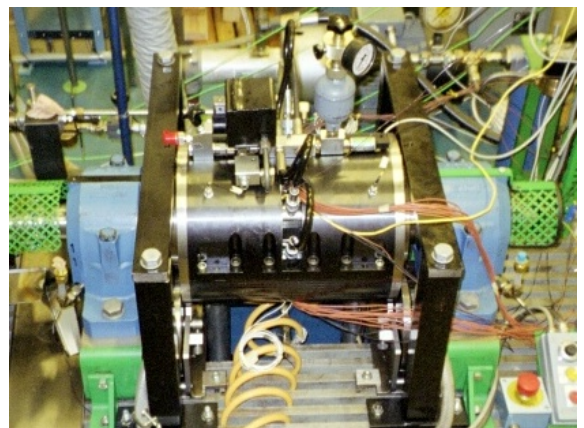
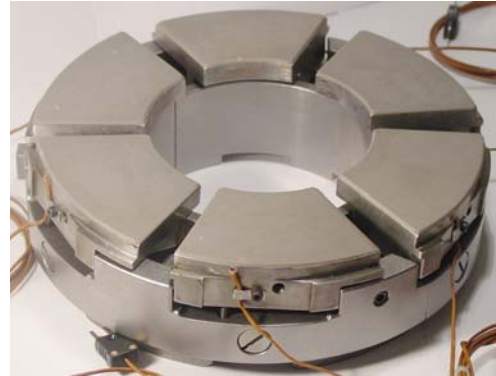


Hydrodynamic Thrust Bearing Rig



Test bearings (1,2), each with six tilting pads, are mounted in the guiding holders (3). These holders can slide within the housing (4), which is positioned on steel wheels (5,6) mounted on rolling element bearings. Such an arrangement permits direct measurement of bearing power loss since the housing is free to rotate by the action of bearing friction torque. Rotation is prevented by a load cell (7) which gives the torque value. Test bearings are loaded back to back against separate collars, integral parts of the main shaft (10). The required load is applied by means of four hydraulic cylinders (8,9) located in the gap between the bearing holders. The main shaft (10) is supported at each end by means of a journal bearing. Power to the test rig is provided by a 143 kW variable speed DC motor.



TECHNICAL SPECIFICATIONS

Speed: 0 – 4500 rpm

Load: 0 – 7 MPa

Measurements: Temperature (in pad, oil film and shaft), Pressure profiles, Friction torque, Oil film thickness.

