

DYNAMIC PRESSURE BEARING AND ROTATING DEVICE EMPLOYING SAME
ABSTRACT

A magnetic fluid is held by a magnetic field in a stationary state and by a centrifugal force during rotation, leak and splash of the magnetic fluid caused by instability of pumping of a dynamic pressure bearing are prevented without using a magnetic fluid with a high saturation magnetization value, and service life of the dynamic pressure bearing is extended. For this purpose, a sleeve 3 having a protruding tubular section is fitted and fixed to the outer periphery of the shaft 1 having a thrust plate 2 formed in an axial vicinity so as to be rotatable relatively to the shaft, an annular cover 4 is formed outwardly from the thrust plate 2 in axial direction, the radial inward end of the annular cover 4 serves as an opening, at least two clearance sections serve as a reservoir 10 for reserving the magnetic fluid, and a magnetomotive force member 15 is provided for concentrating the magnetic flux lines on the radial outside of the end portion 13 of the magnetic fluid 12.

Figure no. 1 is suggested for publication