

The invention relates to the hydraulic engineering industry and may be used in the centrifugal pumps for equilibration of the rotor's axial load.

The centrifugal pump contains a shaft, sealed about the body, provided with an insert and separating plates, an open-type rotor, installed onto the shaft with the possibility of axial displacement. Into the rotor there are made discharge openings and an annular prominence in the lower part of the disk. Into the pump body there is made an annular prominence, symmetric to the annular prominence of the rotor, the prominences being adjacent to each other. Under the action of axial forces between the prominences there is formed a throttling slot. The discharge openings of the rotor's disk are made into one of the discharge chambers, with that the discharge chambers communicate between them via the throttling slit. The separating plate and the faces of the rotor's blades by interacting form the upper thrust bearing, the annular prominences of the rotor and body form the lower thrust bearing, and the body insert with the shaft form the radial bearing of the centrifugal pump.

Claims: 3

Fig.: 1