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中文摘要:

The problem of hydrodynamics of the three-leaf dislocated floating-ring bearing was studied by means of boundary element method. The law including the distribution of pressure on boundary surface (axial, bearing and floating-ring) and its friction loss in different eccentricities was obtained. The results show that the inner friction of three-leaf dislocated bearing increases from 390.875 to 1091.65, and the inner friction of three-leaf dislocated floating-ring bearing increases from 94.2523 to 114.5069 with eccentricity varying from 0 to 0.075 in nondimensional. So changing the pressure and flow field of bearing by adding floating-ring is more stability and less wasted work of friction than three-leaf dislocated bearing.

英文摘要:

The problem of hydrodynamics of the three-leaf dislocated floating-ring bearing was studied by means of boundary element method. The law including the distribution of pressure on boundary surface (axial, bearing and floating-ring) and its friction loss in different eccentricities was obtained. The results show that the inner friction of three-leaf dislocated bearing increases from 390.875 to 1091.65, and the inner friction of three-leaf dislocated floating-ring bearing increases from 94.2523 to 114.5069 with eccentricity varying from 0 to 0.075 in nondimensional. So changing the pressure and flow field of bearing by adding floating-ring is more stability and less wasted work of friction than three-leaf dislocated bearing.

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