NON LINEAIR ANALYSES FOR A HYDRODYNAMIC JOURNAL BEARING

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Abstract

the present work with lubrication theory to the problem of steady-state characteristics of hydrodynamic short bearings considering deference values of eccentricity ratio using a finite deference method the steady- state film pressures are obtained by solving modified Reynolds and non linear model for temporal discretisation for equations of rotor motion by the help of Euler's explicit method the results show that are devious changes en film pressure distribution, the highest film pressure, film thickness distribution, the least film thickness the presence of parameters of couple stress exhibits better stability in comparison with Newtonian fluid.

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