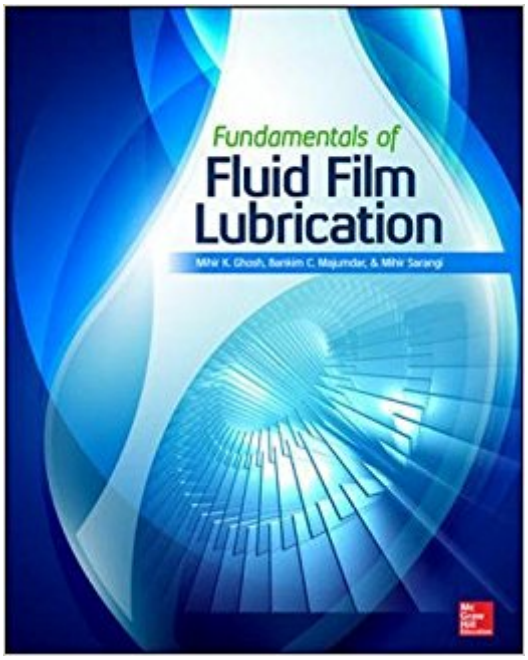
Fundamentals Of Fluid Film Lubrication (Mechanical Engineering)



Synopsis

Comprehensive coverage of fluid film lubrication Written by global experts in the field, this in-depth engineering resource discusses the theory, design, analysis, and application of fluid film lubrication, providing proven methods for reducing friction in rotating machinery components. The book thoroughly addresses all aspects of the topic, from viscosity and rotor-bearing dynamics to elastohydrodynamic lubrication and fluid inertia effects. Fully worked examples, analytical and numerical methods of solutions, practice problems, and detailed illustrations are included in this authoritative reference. Fundamentals of Fluid Film Lubrication covers: Introduction to tribology Viscosity and rheology of lubricants Mechanics of lubricant films and basic equations Hydrodynamic lubrication Finite bearings Thermohydrodynamic analysis of fluid film bearings Design of hydrodynamic bearings Dynamics of fluid film bearings Externally pressurized lubrication Fluid inertia effects and turbulence in fluid film lubrication Gas-lubricated bearings Hydrodynamic lubrication of rolling contacts Elastohydrodynamic lubrication Vibration analysis with lubricated ball bearings Thermal effect in rollingÃ¢â ¬â œsliding contacts

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Customer Reviews

Mihir K. Ghosh, Ph.D., was a professor of Mechanical Engineering at IIT Kharagpur and is a member of the honorary editorial board of the journal, Advances in Vibration Engineering. Bankim C. Majumdar, Ph.D., was a professor of Mechanical Engineering at IIT Kharagpur, associate editor

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