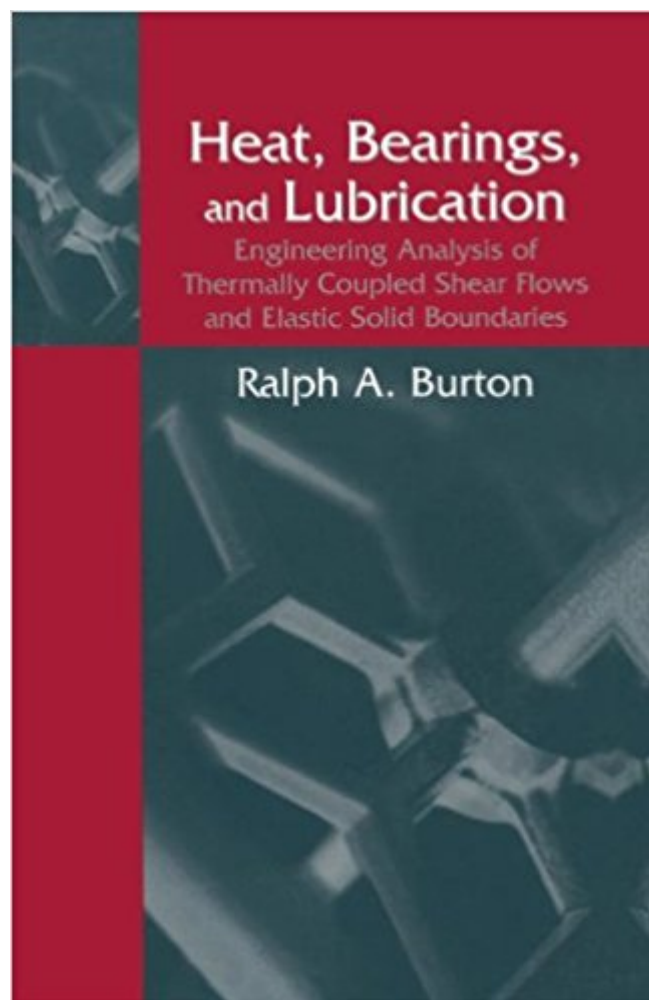




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# Heat, Bearings, And Lubrication: Engineering Analysis Of Thermally Coupled Shear Flows And Elastic Solid Boundaries



## Synopsis

A systematic treatment of the thermal and elastic deformation of bearings, seals, and other machine elements under a wide variety of conditions, with particular emphasis on failure mechanisms when high speeds or loads cause significant frictional heating and on methods for predicting and avoiding such failures. Intended for designers and mechanical engineers responsible for high-performance machinery, the book is unique in discussing instabilities driven by frictional heating and thermal expansion and in developing a theoretical approach to engineering design in those cases in which the thermal problems are pivotal. It thus provides a guide as to what is important in the development of high-performance engineering systems. References to recent publications, new material that fill gaps in the literature, a consistent nomenclature, and a large number of worked examples make this a useful text and reference for both researchers and practising engineers.

## Book Information

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## Customer Reviews

I worked for a very short time for a company that had tribology issues with their gear pumps, and I purchase this book to have a reality check on what I thought about their problems. Although it addresses mostly what happens in the bearings, with the studies and formulas revolving around the bearings and shafts, it allows you see what happens with the gears attached to that shaft and the hydrodynamics around the assembly. I am a passionate bibliophile, but regardless, I think this is a must have book, for somebody that deals with bearings and pumps, as it is nothing more damaging to a pump assembly than bad bearing choices, poor understanding of the thermodynamics and thus

poor lubricity.

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