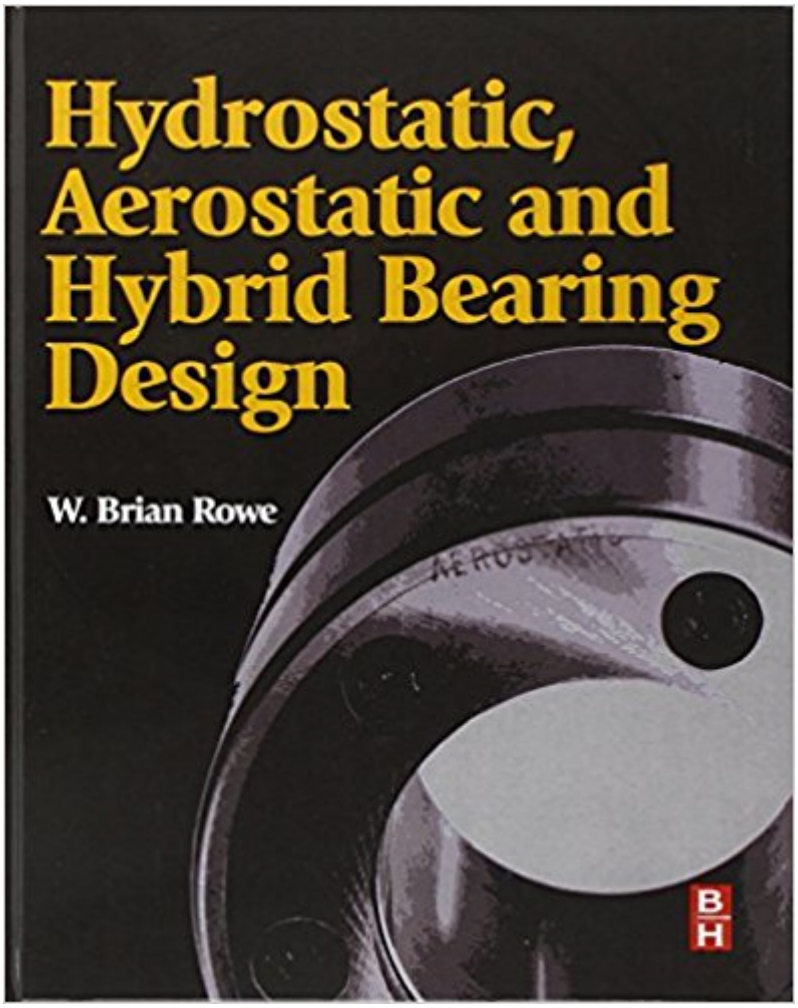
Hydrostatic, Aerostatic And Hybrid Bearing Design



Synopsis

Solve your bearing design problems with step-by-step procedures and hard-won performance data from a leading expert and consultant Compiled for ease of use in practical design scenarios, Hydrostatic, Aerostatic and Hybrid Bearing Design provides the basic principles, design procedures and data you need to create the right bearing solution for your requirements. In this valuable reference and design companion, author and expert W. Brian Rowe shares the hard-won lessons and figures from a lifetimeâ ™s research and consultancy experience. Coverage includes: Clear explanation of background theory such as factors governing pressure, flow and forces, followed by worked examples that allow you to check your knowledge and understanding Easy-to-follow design procedures that provide step-by-step blueprints for solving your own design problems Information on a wide selection of bearing shapes, offering a range and depth of bearing coverage not found elsewhere Critical data on optimum performance from load and film stiffness data to pressure ratio considerations Operating safeguards you need to keep in mind to prevent hot-spots and cavitation effects, helping your bearing design to withstand the demands of its intended application Aimed at both experienced designers and those new to bearing design, Hydrostatic, Aerostatic and Hybrid Bearing Design provides engineers, tribologists and students with a one-stop source of inspiration, information and critical considerations for bearing design success.Structured, easy to follow design procedures put theory into practice and provide step-by-step blueprints for solving your own design problems.Covers a wide selection of bearing shapes, offering a range and depth of information on hydrostatic, hybrid and aerostatic bearings not found elsewhere.Includes critical data on optimum performance, with design specifics from load and film stiffness data to pressure ratio considerations that are essential to make your design a success.

Book Information

Hardcover: 352 pages

Publisher: Butterworth-Heinemann; 1 edition (April 11, 2012)

Language: English

ISBN-10: 0123969948

ISBN-13: 978-0123969941

Product Dimensions: 7.5 x 0.9 x 9.3 inches

Shipping Weight: 1.8 pounds (View shipping rates and policies)

Average Customer Review: 5.0 out of 5 stars 1 customer review

Best Sellers Rank: #2,786,526 in Books (See Top 100 in Books) #36 inÂ Books > Engineering &

Transportation > Engineering > Mechanical > Tribology #133 inÂ Books > Engineering & Transportation > Engineering > Industrial, Manufacturing & Operational Systems > Industrial Design > Packaging #177 inÂ Books > Engineering & Transportation > Engineering > Aerospace > Aerodynamics

Customer Reviews

Solve your bearing design problems with step-by-step procedures and hard-won performance data from a leading expert and consultant Compiled for ease of use in practical design scenarios, Hydrostatic, Aerostatic and Hybrid Bearing Design provides the basic principles, design procedures and data you need to create the right bearing solution for your requirements. In this valuable reference and design companion, author and expert W. Brian Rowe shares the hard-won lessons and figures from a lifetimeâ ™s research and consultancy experience. Coverage includes: Clear explanation of background theory such as factors governing pressure, flow and forces, followed by worked examples that allow you to check your knowledge and understanding Easy-to-follow design procedures that provide step-by-step blueprints for solving your own design problems Information on a wide selection of bearing shapes, offering a range and depth of bearing coverage not found elsewhere Critical data on optimum performance from load and film stiffness data to pressure ratio considerations Operating safeguards you need to keep in mind to prevent hot-spots and cavitation effects, helping your bearing design to withstand the demands of its intended application Aimed at both experienced designers and those new to bearing design, Hydrostatic, Aerostatic and Hybrid Bearing Design provides engineers, tribologists and students with a one-stop source of inspiration, information and critical considerations for bearing design success.

W. Brian Rowe is a consulting engineer and recognized bearing expert with more than 30 yearsâ ™ experience working on a wide range of machinery design problems across all industries. He has previously run courses on bearings at Coventry University in the UK and Stanford University in the USA, as well as sessions on the topic for industrial engineers in Chengdu, China. He has received awards in recognition of his work, including the Walter R. Evans Award for significant contributions to the field of rotor dynamics in 2004.

This is a wonderful reference book for anyone interested in hydrostatic or aerostatic bearings. It can guide you through designing your own bearings from scratch. And it’s a great asset when troubleshooting machinery or equipment that utilizes these types of bearings. It does a good job of

explaining the fundamental physics of these devices. And it also gives useful equations and factors for approximating performance of most bearing geometries.