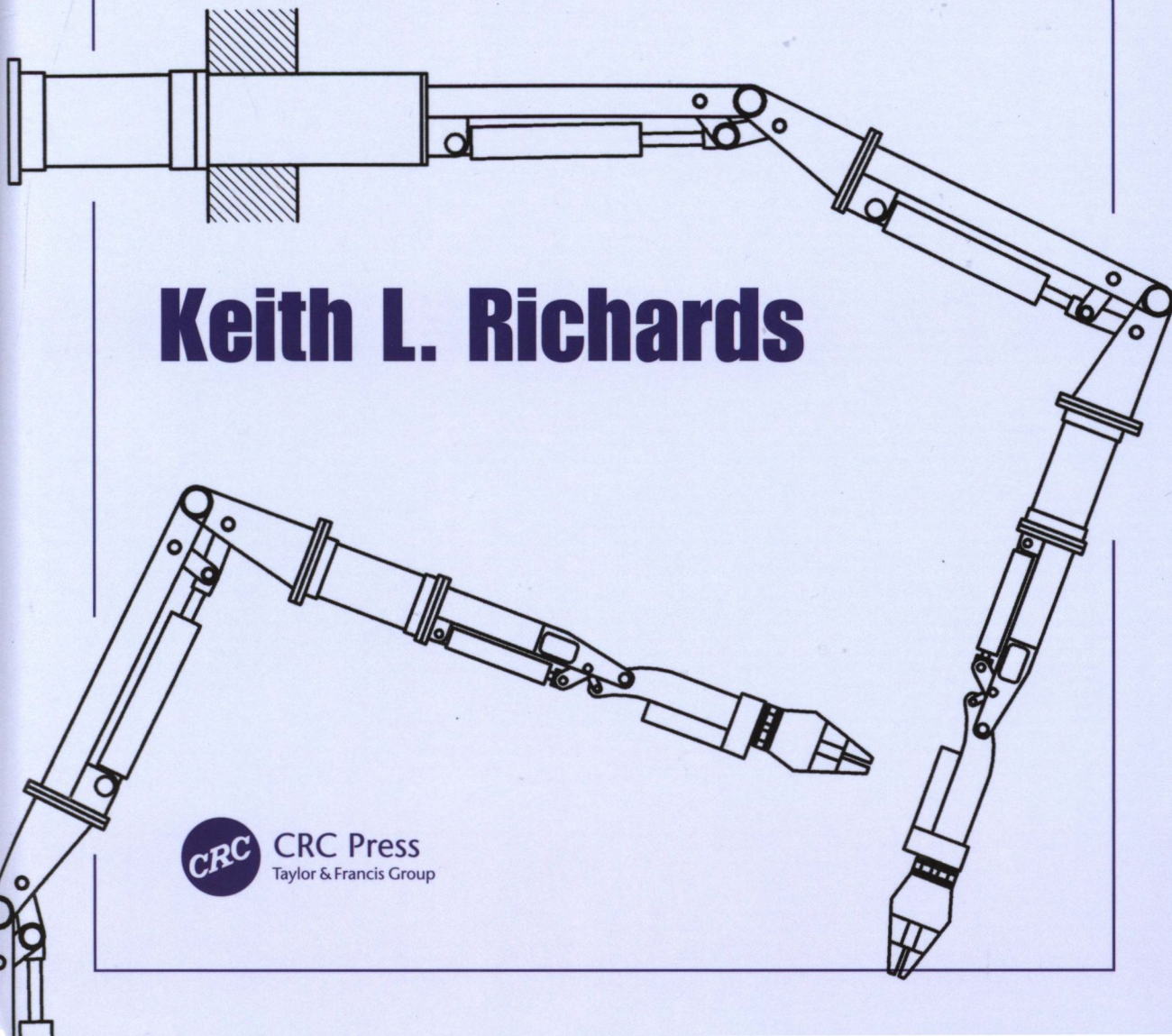
Design Engineer's Sourcebook



Keith L. Richards

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CIVIL ENGINEERING

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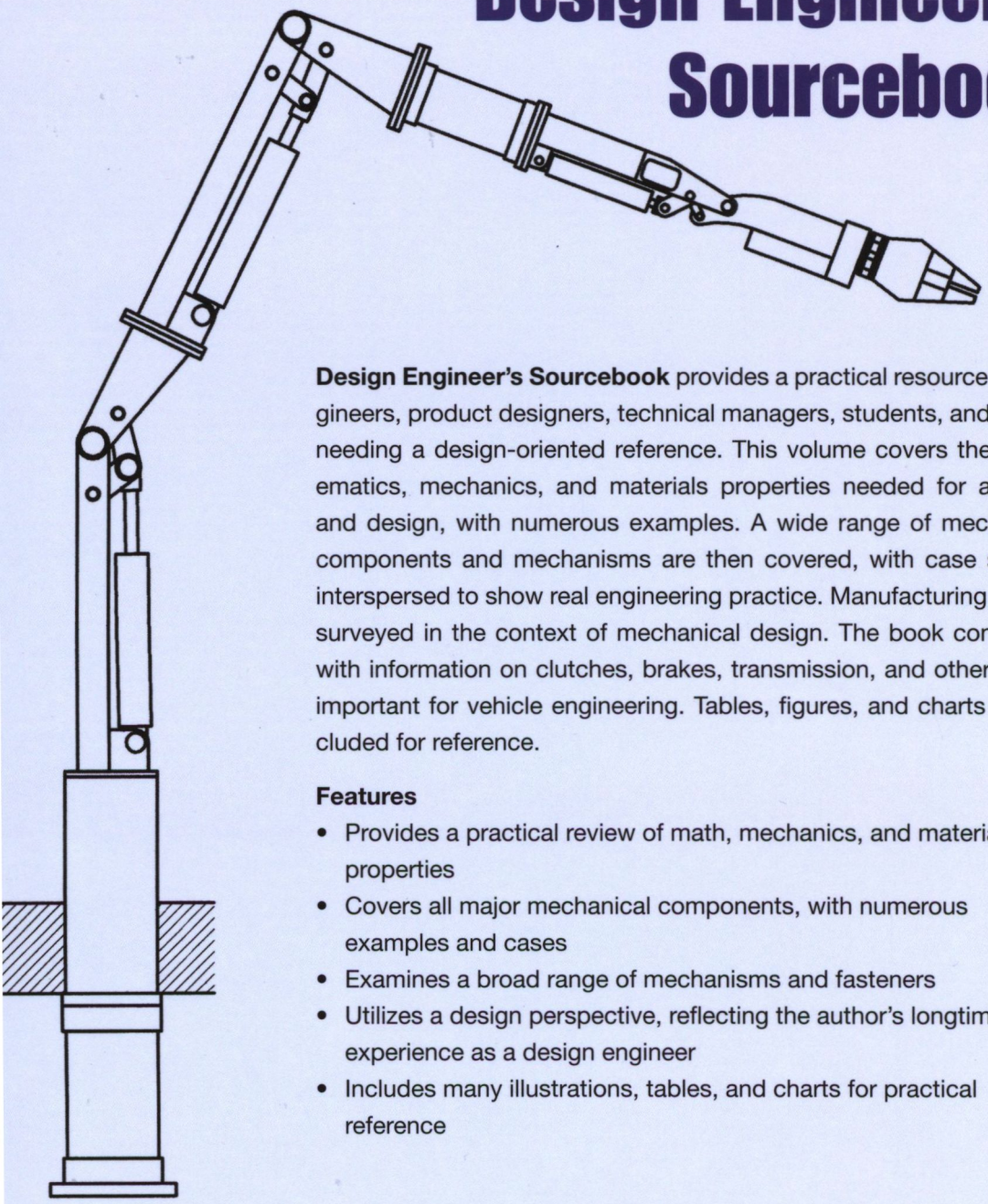

Design Engineer's Sourcebook provides a practical resource for engineers, product designers, technical managers, students, and others needing a design-oriented reference. This volume covers the mathematics, mechanics, and materials properties needed for analysis and design, with numerous examples. A wide range of mechanical components and mechanisms are then covered, with case studies interspersed to show real engineering practice. Manufacturing is then surveyed in the context of mechanical design. The book concludes with information on clutches, brakes, transmission, and other topics important for vehicle engineering. Tables, figures, and charts are included for reference.

Features

- Provides a practical review of math, mechanics, and materials properties
- Covers all major mechanical components, with numerous examples and cases
- Examines a broad range of mechanisms and fasteners
- Utilizes a design perspective, reflecting the author's longtime experience as a design engineer
- Includes many illustrations, tables, and charts for practical reference

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711 Third Avenue
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Design Engineer's Sourcebook

Author

Keith L. Richards is a retired mechanical design engineer who has worked in the industry for more than 55 years. Initially, he served an engineering apprenticeship with BSA Tools that manufactured a wide range of machine tools including the Acme Gridley, a multi-spindle automatic lathe built under licence, and the BSA single spindle automatic lathes; these were used in Britain and widely exported around the world.

On leaving the BSA, for a number of years he served as a freelance engineering designer in a wide range of industries that also included aluminum rolling mill design, Industrial fork lift trucks, and the Hutton tension leg platform, an offshore oil production platform. His responsibility on this project covered the mooring system components of the platform, and he was answerable to the customer (Conoco) and Lloyds inspectorate for all the engineering aspects. In later years, Keith was more involved in the aerospace industry working on projects covering aircraft undercarriages and environmental control systems for military and commercial aircraft, and also worked on the A380 wing box and trailing edge panels.

Contents

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Section II Mechanics

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