Power System Stability

Power System Stability: Volumes I, II, and III, by Edward Wilson Kimbark. An IEEE Press Classic Reissue in the IEEE Press Power Systems Engineering Series, Paul M. Anderson, Series Editor (previously published by John Wiley & Sons, Inc.). IEEE Press: 445 Hoes Lane, Piscataway, NJ 08855-1331, (908) 562-3967. Softcover in slipcased 3-vol. set, 1008 pages. IEEE Order No. PP5600, ISBN 0-7803-1135-3.

IEEE Press and the IEEE Power Engineering Society are pleased to bring back into print this complete set of Edward Kimbark's work on power system stability. For decades, these classic texts have been an invaluable though hard-to-find resource for power engineering students and professionals. The volumes offer clear and thorough information on system modeling, design, and development based on years of research and study. The set includes:

- Volume I: Elements of Stability
- Volume II: Power Circuit Breakers and Protective Relays
- Volume III: Synchronous Machines

The subject of power systems stability has been studied and written about for decades. It has always been a challenge for the engineer to understand the physical description of a system described by a huge number of differential equations. The system modeling is central to an understanding o f these large dynamic systems. Modeling is one of the central themes in Kimbark's Power System Stability books. His discussion of the system equations remain as clear and descriptive today as it was when first published. Many engineers have seen references to these works, and may have had difficulty in finding copies for study. This new printing presents a new chance for these engineers to now have copies for personal study and reference.

Kimbark studied Electrical Engineering at Northwestern University and at the Massachusetts Institute of Technology, where he received the ScD degree in 1937. He then began a career in teaching and research at the University of California, Berkeley, MIT, Polytechnic Institute, Brooklyn, Instituto Tenologico de Aeronautica (San Jose Campos Brazil) and, finally, as the dean of Engineering at Seattle University. In 1962 Kimbark joined the Bonneville Power Administration as head of the systems analysis branch, where he remained until his retirement in 1976. He continued to work on special tasks at Bonneville until his death in 1982.

Power System Control and Stability

Power System Control & Stability, by Paul M. Anderson, Power Math Associates, San Diego, and A.A. Fouad, Iowa State University. Published by IEEE Press, 445 Hoes Lane, Piscataway, NJ 08855-1331, (908) 562-3967. Hardcover, 480 pages. IEEE Order No. PC3798, ISBN 0-7803-11029-2.

As power systems continue to grow in size and complexity, it becomes increasingly important to understand system stability to prevent dynamic collapse and possible blackout. *Power System Control & Stability* illustrates synchronous generators and their prime movers and controls as well as extensive mathematical modeling of these important items.

A must-have for professionals in the electric power industry as well as engineering students, this is one of the few books of its kind available in North America. The result of years of effort by its authors and contributors, *Power System Control & Stability* is a key source book on electrical systems.

Partial contents: Power system stability; the elementary mathematical model; system response to small disturbances; the electromagnetic torque; the simulation of synchronous machines; linear models of the synchronous machines; excitation systems; effect of excitation on stability; multimachine systems with constant impedance loads; appendices; index

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Analysis of Electric Machinery

Analysis of Electric Machinery, by Paul C. Krause and Oleg Wasynczuk, Purdue University and Scott D. Sudhoff, University of Missouri at Rolla. A volume in the IEEE Press Power Systems Engineering Series, Paul M. Anderson, Series Editor. Published by IEEE PRESS, 445 Hoes Lane, Piscataway, NJ 08855-1331, (908) 562-3967. Hardcover, 584 pages. IEEE Order No. PC4556, ISBN 0-7803-1101-9.

This IEEE Press reprinting of the 1986 book focuses on the areas of electric power drives. This advanced text and industry reference addresses the electrical engineering and power industry as it relates to electric machines and electromechanical devices. Focusing on the areas of electric power and electric drives, *Analysis of Electric Machinery* emphasizes formulation for control applications and computer simulation.

With this comprehensive and authoritative resource, you will find these key features:

- Comprehensive coverage of formulation of equations of electric machines and converters appropriate for computer simulation and linearized control analysis
- Complete models of machines and converters that form the basis for predicting and understanding system-level performance
- A state-of-the-art approach to the analysis of electric machines and switching converters based on the now widely used arbitrary reference frame theory
- In-depth treatment of electromechanical devices (motors and electric generators) and their control
- Extensive material that is used in the electric drives industry as a basis for control design

A valuable reference tool for system analysts and electric power and control engineers, this text is also appropriate for courses at senior and graduate levels.

Electric Fuses

Electric Fuses, 2nd edition, by A. Wright and P.G. Newbery, part of Power Series No. 20 published by Institution of Electrical Engineers, December 1994, ISBN 0 85296 820 5 (case) and 0 85296 825 6 (paper), size/format 234 x 156 mm case and paperback, 200 pages.

Wright & Newbery's classic guide to the world of electric fuses has now been fully revised for the 1990s and remains the comprehensive reference work on this subject. In addition to chapters outlining the historical development of the fuse, on theory and construction of different types used, the book also deals with application requirements, standards and quality assurance procedures. Much of this is essential reading for manufacturers and those in the industry making use of arcing fuse technology.

Contents: Introduction; pre-arcing behavior of cartridge fuselinks; arching behavior of cartridge fuselinks; construction and types of low-voltage fuses; constructions and types of high-voltage fuses; international and national standards; manufacture, quality assurance and inspection; references; bibliography; index.
