



Process Dynamics and Control

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Wiley, 2003. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! Summary: PART ONE: INTRODUCTORY CONCEPTS.1. Introduction to Process Control.2. Theoretical Models of Chemical Processes.PART TWO: DYNAMIC BEHAVIOR OF PROCESSES.3. Laplace Transforms.4. Transfer Function and State-Space Models.5. Dynamic Behavior of First-Order and Second-Order Processes.6. Dynamic Response Characteristics of More Complicated Processes.7. Development of Empirical Models from Process Data.PART THREE: FEEDBACK AND FEEDFORWARD CONTROL.8. Feedback Controllers.9. Control System Instrumentation.10. Overview of Control System Design.11. Dynamic Behavior and Stability of Closed-Loop Control Systems.12. PID Controller Design, Tuning, and Troubleshooting.13. Frequency Response Analysis.14. Control System Design Based on Frequency Response Analysis.15. Feedforward and Ratio Control.PART FOUR: ADVANCED PROCESS CONTROL.16. Enhanced Single-Loop Control Strategies.17. Digital Sampling, Filtering, and Control.18. Multiloop and Multivariable Control.19. Real-Time Optimization.20. Model Predictive Control.21. Process Monitoring.22. Batch Process Control.23. Introduction to Plantwide Control.24. Plantwide Control System Design .Appendix A: Digital Process Control Systems: Hardware and Software.Appendix B: Review of Thermodynamics Concepts for Conservation Equations.Appendix C: Use of MATLAB in Process Control.Appendix D: Contour Mapping and the Principle of the Argument.Appendix E: Dynamic Models and Parameters Used for Plantwide Control Chapters.

Reviews

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