Record Nr. UNINA9910586596203321 Autore Niu Steve S. Titolo Process control: engineering analyses and best practices / / Steve S. Niu, Deyun Xiao Pubbl/distr/stampa Cham, Switzerland: ,: Springer, , [2022] ©2022 **ISBN** 3-030-97067-1 Descrizione fisica 1 online resource (536 pages) Collana Advances in industrial control Disciplina 629.8312 Control theory Soggetti PID controllers Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index. Part I: The Big Picture1. Process Control Overview2. Process Control Nota di contenuto Knowledge FrameworkPart II: Essential Knowledge3. Basic PID Control4. Complex PID Control Loops5. PID Loop Tuning6. Advanced Process Control Part III: Analytic Skills and Problem Solving Methodology7. Methodology of Process Analysis8. Methodology of Process Control Design9. Methodology of Control Problem Troubleshooting Part IV: Process Control Typicals 10. Control Typicals: Common Calculations 11. Control Typicals: Equipment Control 12. Control Typicals: Plant-Wide Control and Unit Control Sommario/riassunto Process Control details the core knowledge and practical skills that a successful process control practitioner needs. It explains the essential technologies that are in use in current industrial practice or which may be wanting for the future. The book focuses on practical considerations, not only on those that make a control solution work, but also on those that prevent it from failing, especially for complex control loops and plant-wide control solutions.