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Selection; Design Procedures for Iron-Sponge Units; Design Procedures for Amine Systems; Example Problems; Chapter 8. Gas Dehydration; Water Content Determination; Glycol Dehydration; Glycol Dehydration Example; Solid Bed Dehydration; Dry Desiccant Design Example; Chapter 9. Gas Processing; Absorption/Lean Oil; Refrigeration; Choice of Process; Chapter 10. Compressors; Types of Compressors; Specifying a Compressor; Reciprocating Compressors-Process Considerations; Centrifugal Compressors-Surge Control and Stonewalling
Centrifugal Compressors Process ConsiderationsChapter 11. Reciprocating Compressors; Components; Cylinder Sizing; Rod Load; Cooling and Lubrication Systems; Pipe Sizing Considerations; Example Problem; Chapter 12. Mechanical Design of Pressure Vessels; Design Considerations; Inspection Procedures; Estimating Vessel Weights; Specification and Design of Pressure Vessels; Example Problem; Chapter 13. Pressure Relief; Relief Requirements; Type of Devices; Valve Sizing; Installation; Example Problems; Chapter 14. Safety Systems; Hazard Tree; Developing a Safe Process; Primary Defense
Failure Mode Effect Analysis-FMEAModified FMEA Approach; API Recommended Practice 14C; Manual Emergency Shutdown; Annunciation Systems; Function Matrix and Function Charts; Symbols; Hazards Analysis; Safety Management Systems; Safety Case and Individual Risk Rate; Chapter 15. Valves, Fittings, and Piping Details; Valve Types; Chokes; Piping Design Considerations; General Piping Design Details; Miscellaneous Piping Design Details; Chapter 16. Prime Movers; Reciprocating Engines; Gas Turbine Engines; Environmental Considerations; Chapter 17. Electrical Systems; Sources of Power Power System Design

Sommario/riassunto

This revised edition puts the most current information about gas-handling systems and facilities at your fingertips. The authors channeled their classroom and field experience into this volume, which features many new sections such as:* Heat recovery units* Kinetic inhibitors and anti-agglomerators* Trays and packing for distillation and absorption towers* Compressor valves* Foundation design considerations for reciprocating compressors* Pressure vessel issues and components * Nox reduction in engines and turbines* Safety management systemsThis book