| Record INI.  | UNISA996212703003316  |
|--|---|
| Titolo   | Guidelines for pressure relief and effluent handling systems [[electronic resource] /] / Center for Chemical Process Safety of the American Institute of Chemical Engineers |
| Pubbl/distr/stampa   | New York, N.Y., : American Institute of Chemical Engineers, c1998   |
| ISBN   | 1-282-78325-4<br>9786612783258<br>0-470-93519-7<br>1-59124-596-6  |
| Descrizione fisica   | 1 online resource (564 p.)  |
| Disciplina   | 620.106<br>660.0286<br>660/.028/6   |
| Soggetti   | Chemical plants - Waste disposal<br>Hazardous wastes - Management<br>Relief valves<br>Sewage disposal   |
|  |   |
| Lingua di pubblicazione  | Inglese   |
| Lingua di pubblicazione<br>Formato   | Inglese<br>Materiale a stampa   |
| Lingua di pubblicazione<br>Formato<br>Livello bibliografico  | Inglese<br>Materiale a stampa<br>Monografia   |
| Lingua di pubblicazione<br>Formato<br>Livello bibliografico<br>Note generali                         | Inglese<br>Materiale a stampa<br>Monografia<br>Description based upon print version of record.  |
| Lingua di pubblicazione<br>Formato<br>Livello bibliografico<br>Note generali<br>Nota di bibliografia | Inglese<br>Materiale a stampa<br>Monografia<br>Description based upon print version of record.<br>Includes bibliographical references and index.                            |

1.

|                    | Terminology; 2.4.2 Pressure Relief Valves; 2.4.3 Rupture Disk Devices;<br>2.4.4 Devices in Combination; 2.4.5 Miscellaneous Nonreclosing<br>Devices; 2.4.6 Miscellaneous Low-Pressure Devices; 2.4.7<br>Miscellaneous Relief System Components<br>2.4.8 Selection of Pressure Relief Devices2.5. Relief System Layout;<br>2.5.1 General Code Requirements; 2.5.2 Pressure Relief Valves; 2.5.3<br>Rupture Disk Devices; 2.5.4 Low-Pressure Devices; 2.5.5 Series/Parallel<br>Devices; 2.5.6 Header Systems; 2.5.7 Mechanical Integrity; 2.5.8<br>Material Selection; 2.5.9 Drainage and Freeze-up Provisions; 2.5.10<br>Noise; 2.6. Design Flows and Code Provisions; 2.6.1 Safety Valves;<br>2.6.2 Relief Valves; 2.6.3 Low Pressure Devices; 2.6.4 Rupture Disk<br>Devices; 2.6.5 Devices in Combination; 2.6.6 Miscellaneous<br>Nonreclosing Devices; 2.7. Scenario Selection Considerations<br>2.7.1 Events Requiring Relief Due to Overpressure2.7.2 Design<br>Scenarios; 2.8. Fluid Properties and System Characterization; 2.8.1 Data<br>Sources/Determination/Estimation; 2.8.2 Pure-Component Properties;<br>2.8.3 Mixture Properties; 2.8.4 Phase Behavior; 2.8.5 Chemical<br>Reaction; 2.8.6 Miscellaneous Fluid Characteristics; 2.9. Fluid Behavior<br>in Vessel; 2.9.1 Accounting for Chemical Reaction; 2.9.2 Two-Phase<br>Venting Conditions and Effects; 2.10. Flow of Fluids through Relief<br>Systems; 2.10.1 Conditions for Two-Phase Flow; 2.10.2 Nature of<br>Compressible Flow<br>2.10.3 Stagnation Pressure and Critical Pressure Ratio2.10.4 Flow Rate<br>to Effluent Handling System; 2.11. Relief System Reliability; 2.11.1<br>Relief Device Reliability; 2.11.2 System Reliability; Appendix 2A.<br>International Codes and Standards; Appendix 2B. Property Mixing<br>Rules; Appendix 2C. Code Case: Protection by System Design; 3 Relief<br>System Design and Rating Computations; 3.1. Introduction; 3.1.1<br>Purpose and Scope; 3.1.2 Required Background; 3.2. Vessel Venting<br>Background; 3.2.1 General; 3.2.2 Material and Energy Balances; 3.2.3<br>Phase Behavior; 3.2.4 Two-Phase Venting Technology<br>3.2.5 Methods of Solution |
|--------------------|---|
| Sommario/riassunto | Current industry, government and public emphasis on containment of<br>hazardous materials makes it essential for each plant to reduce and<br>control accidental releases to the atmosphere. Guidelines for Pressure<br>Relief and Effluent Handling Systems meets the need for information on<br>selecting and sizing pressure relief devices and effluent handling<br>systems that will maintain process integrity and avoid discharge of<br>potentially harmful materials to the atmosphere. With a CD-ROM<br>enclosed containing programs for calculating flow through relief<br>devices, effluent handling systems, and associated piping, t  |