Record Nr. UNINA9910142396003321 Guidelines for improving plant reliability through data collection and **Titolo** analysis [[electronic resource]] Pubbl/distr/stampa New York, : American Institute of Chemical Engineers, c1998 **ISBN** 1-282-78326-2 9786612783265 0-470-93524-3 0-470-93526-X 1-59124-625-3 Descrizione fisica 1 online resource (210 p.) Collana CCPS guidelines series Disciplina 620.00452 660.2815 660/.2815 Soggetti Chemical process control - Statistical methods Reliability (Engineering) - Statistical methods Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Guideline for Improving Plant Reliability through Data Collection and Analysis; Contents; Preface; Acknowledgments; 1 Introduction; 1.1. Background; 1.2. Taxonomy; 1.3. Data Aggregation/Sharing; 2 Definitions; 2.1. Introduction; 2.2. Discussion of Key Reliability Terms; 2.3. Glossary of Terms; 3 Methods of Analysis; 3.1. Introduction; 3.2. Basic Concepts of Data Analysis; 3.2.1. Failure Data; 3.2.2. Need for Correct Failure Modes; 3.2.3. Types of Systems-Repairable or Nonrepairable; 3.2.4. Reliability versus Availability; 3.2.5. Types of Data-Censoring; 3.2.6. Definitions 3.2.7. Dealing with Censored Data3.2.8. Common Cause Failures; 3.2.9. Predictive versus Descriptive Methods; 3.3. Data Manipulation Examples: 3.3.1. Methods of Analysis: 3.4. Cyclical Service: 3.5. Batch Service; 3.6. Standby Service; 3.7. Failures Following a Repair; 3.8. Selecting an Operating Mode; 3.9. Analysis Based on Statistical Inferences: 3.9.1. Modeling Reliability Parameters for the Population:

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Reliability Process

## Sommario/riassunto

Written by reliability data experts, the book gives plant managers and supervisors the guidance they need to collect, and use with confidence, process equipment reliability data for risk-based decisions. Focusing on the process industries, it provides the protocol and techniques to collect and organize high quality plant performance, maintenance, and repair data from your own operations, and includes methods and examples on how the data can be converted into useful information for engineering, maintenance, safety, and loss prevention. This data can be used for: facility reliability/availabilit

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