1. Record Nr. UNINA9910143579903321

Autore	Ericson Clifton A., II
Titolo	Hazard analysis techniques for system safety / / Clifton A. Ericson, II
Pubbl/distr/stampa	Hoboken, NJ, : Wiley-Interscience, c2005
ISBN	1-280-27735-1 9786610277353 0-470-49155-8 0-471-73942-1 0-471-73941-3
Descrizione fisica	1 online resource (521 p.)
Disciplina	620.8/6 620.86
Soggetti	Industrial safety - Data processing System safety
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	Hazard Analysis Techniques for System Safety; Contents; PREFACE; ACKNOWLEDGMENTS; 1. System Safety; 1.1 Introduction; 1.2 System Safety Background; 1.3 System Safety Characterization; 1.4 System Safety Process; 1.5 System Concept; 1.5.1 General System Model; 1.5.2 System Attributes; 1.5.3 System Types; 1.5.4 System Life Cycle; 1.5.5 System Development; 1.6 Summary; 2. Hazards, Mishap, and Risk; 2.1 Introduction; 2.2 Hazard-Related Definitions; 2.3 Hazard Theory; 2.4 Hazard Actuation; 2.5 Hazard Causal Factors; 2.6 Hazard-Mishap Probability; 2.7 Recognizing Hazards; 2.8 Hazard Description 2.9 Summary3. Hazard Analysis Types and Techniques; 3.1 Types and Techniques; 3.2 Description of Hazard Analysis Types; 3.2.1 Conceptual Design Hazard Analysis Type (CD-HAT); 3.2.2 Preliminary Design Hazard Analysis Type (PD-HAT); 3.2.3 Detailed Design Hazard Analysis Type (DD-HAT); 3.2.4 System Design Hazard Analysis Type (SD-HAT); 3.2.5 Operations Design Hazard Analysis Type (OD-HAT); 3.2.6 Human Design Hazard Analysis Type (HD-HAT); 3.2.7 Requirements Design Hazard Analysis Type (RD-HAT); 3.3 Timing of Hazard Analysis Types; 3.4 Interrelationship of Hazard Analysis Types

3.5 Hazard Analysis Techniques3.5.1 Technique Attributes; 3.5.2 Primary Hazard Analysis Techniques; 3.6 Inductive and Deductive Techniques; 3.7 Qualitative and Quantitative Techniques; 3.8 Summary; 4. Preliminary Hazard List; 4.1 Introduction; 4.2 Background; 4.3 History; 4.4 Theory; 4.5 Methodology; 4.6 Worksheet; 4.7 Hazard Checklists; 4.8 Guidelines; 4.9 Example: Ace Missile System; 4.10 Advantages and Disadvantages; 4.11 Common Mistakes to Avoid; 4.12 Summary; 5. Preliminary Hazard Analysis; 5.1 Introduction; 5.2 Background; 5.3 History; 5.4 Theory; 5.5 Methodology; 5.6 Worksheet 5.7 Guidelines5.8 Example: Ace Missile System; 5.9 Advantages and Disadvantages; 5.10 Common Mistakes to Avoid; 5.11 Summary; 6. Subsystem Hazard Analysis; 6.1 Introduction; 6.2 Background; 6.3 History; 6.4 Theory; 6.5 Methodology; 6.6 Worksheet; 6.7 Guidelines; 6.8 Example: Ace Missile System; 6.9 Advantages and Disadvantages; 6.10 Common Mistakes to Avoid; 6.11 Summary; 7. System Hazard Analysis; 7.1 Introduction; 7.2 Background; 7.3 History; 7.4 Theory; 7.5 Methodology; 7.6 Worksheet; 7.7 Guidelines; 7.8 Example; 7.9 Advantages and Disadvantages; 7.10 Common Mistakes to Avoid; 7.11 Summary
8. Operating and Support Hazard Analysis8.1 Introduction; 8.2 Background; 8.3 History; 8.4 Definitions; 8.5 Theory; 8.6 Methodology; 8.7 Worksheet; 8.8 Hazard Checklists; 8.9 Support Tools; 8.10 Guidelines; 8.11 Examples; 8.11.1 Example 1; 8.11.2 Example 2; 8.12 Advantages and Disadvantages; 8.13 Common Mistakes to Avoid; 8.14 Summary; 9. Health Hazard Assessment; 9.1 Introduction; 9.2 Background; 9.3 History; 9.4 Theory; 9.5 Methodology; 9.6 Worksheet; 9.7 Checklist; 9.8 Example; 9.9 Advantages and Disadvantages; 9.10 Common Mistakes to Avoid; 9.11 Summary
10. Safety Requirements/Criteria Analysis

Sommario/riassunto

A practical guide to identifying hazards using common hazard analysis techniquesMany different hazard analysis techniques have been developed over the past forty years. However, there is only a handful of techniques that safety analysts actually apply in their daily work. Written by a former president of the System Safety Society and winner of the Boeing Achievement and Apollo Awards for his safety analysis work, Hazard Analysis Techniques for System Safety explains, in detail, how to perform the most commonly used hazard analysis techniques employed by the system safety engineering di