Record Nr. UNINA9910450684303321 Autore Zio Enrico Titolo An introduction to the basics of reliability and risk analysis [[electronic resource] /] / Enrico Zio Singapore, : World Scientific, c2007 Pubbl/distr/stampa **ISBN** 1-62198-031-6 1-281-12174-6 9786611121747 981-270-741-7 Descrizione fisica 1 online resource (237 p.) Collana Series on quality, reliability & engineering statistics;; v. 13 620/.00452 Disciplina Soggetti Reliability (Engineering) Risk assessment 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. Nota di contenuto Contents: 1 . Introduction: 2 . Basic concepts of safety and risk analysis; 3. Methods for hazard identification; 4. Basics of probability theory for applications to reliability and risk analysis; 5. Reliability of simple systems: 6. Availability and maintainability: 7. Fault tree analysis; 8. Event tree analysis; 9. Estimation of reliability parameters from experimental data; Appendix A: Table of Standard Normal Cumulative Distribution; Appendix B: Table of Chi-square Cumulative Distribution Sommario/riassunto The necessity of expertise for tackling the complicated and multidisciplinary issues of safety and risk has slowly permeated into all engineering applications so that risk analysis and management has gained a relevant role, both as a tool in support of plant design and as an indispensable means for emergency planning in accidental situations. This entails the acquisition of appropriate reliability modeling and risk analysis tools to complement the basic and specific engineering knowledge for the technological area of application. Aimed at providing an organic view of the subject, this book pro