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model; 1.8. Intrinsic parameters of the material (C and m); 1.9. Fracture mechanics elements used in reliability; 1.10. Crack rate (life expectancy) and s.i.f. (K); 1.10.1. Simplified version of Taylor's law for machining; 1.11. Elements of stress (S) and resistance theory (R); 1.11.1. Case study, part 2 - suspension bridge (Cirta); 1.11.2. Case study: failure surface of geotechnical materials; 1.12. Conclusion; 1.13. Bibliography
2.4.1. Development and calculations 2.5. Confidence interval for estimating a normal mean: unknown variance; 2.6. Conclusion; 2.7. Bibliography; Chapter 3. Analysis of the Reliability of Materials and Structures by the Bayesian Approach; 3.1. Introduction to the Bayesian method used to evaluate reliability; 3.2. Posterior distribution and conjugate models; 3.2.1. Independent events; 3.2.2. Counting diagram; 3.3. Conditional probability or Bayes' law; 3.4. Anterior and posterior distributions; 3.5. Reliability analysis by moments methods, FORM/SORM
3.6. Control margins from the results of fracture mechanics

Sommario/riassunto

This second book of a 3-volume set on Fracture Mechanics completes the first volume through the analysis of adjustment tests suited to correctly validating the justified use of the laws conforming to the behavior of the materials and structures under study.This volume focuses on the vast range of statistical distributions encountered in reliability. Its aim is to run statistical measurements, to present a report on enhanced measures in mechanical reliability and to evaluate the reliability of repairable or unrepairable systems. To achieve this, the author presents a theoretical and