Next Generation Halt And Hass Robust Design Of Electronics And Systems Quality And Reliability Engineering Series

MAXWELL GILLIAN

Physics of Failure, Accelerated Testing, Fatigue, and Reliability Applications Sae International Safety and Reliability – Safe Societies in a Changing World collects the papers presented at the 28th European Safety and Reliability Conference, ESREL 2018 in Trondheim, Norway, June 17-21, 2018. The contributions cover a wide range of methodologies and application areas for safety and reliability that contribute to safe societies in a changing world. These methodologies and applications include: - foundations of risk and reliability assessment and management - mathematical methods in reliability and safety - risk assessment - risk management - system reliability - uncertainty analysis - digitalization and big data - prognostics and system health management - occupational safety - accident and incident modeling - maintenance modeling and applications - simulation for safety and reliability analysis - dynamic risk and barrier management - organizational factors and safety culture - human factors and human reliability - resilience engineering - structural reliability - natural hazards - security - economic analysis in risk management Safety and Reliability – Safe Societies in a Changing World will be invaluable to academics and professionals working in a wide range of industrial and governmental sectors: offshore oil and gas, nuclear engineering, aeronautics and aerospace, marine transport and engineering, railways, road transport, automotive engineering, civil engineering, critical infrastructures, electrical and electronic engineering, energy production and distribution, environmental engineering, information technology and telecommunications, insurance and finance, manufacturing, marine transport, mechanical engineering, security and protection, and policy making.

Next Generation HALT and HASS John Wiley & Sons

Outlines the correct procedures for doing FMEAs and how to successfully apply them in design, development, manufacturing, and service applications There are a myriad of quality and reliability tools available to corporations worldwide, but the one that shows up consistently in company after company is Failure Mode and Effects Analysis (FMEA). Effective FMEAs takes the best practices from hundreds of companies and thousands of FMEA applications and presents streamlined procedures for veteran FMEA practitioners, novices, and everyone in between. Written from an applications viewpoint—with many examples, detailed case studies, study problems, and tips included—the book covers the most common types of FMEAs, including System FMEAs, Design FMEAs, Process FMEAs, Maintenance FMEAs, Software FMEAs, and others. It also presents chapters on Fault Tree Analysis, Design Review Based on Failure Mode (DRBFM), Reliability-Centered Maintenance (RCM), Hazard Analysis, and FMECA (which adds criticality analysis to FMEA). With extensive study problems and a companion Solutions Manual, this book is an ideal resource for academic curricula, as well as for applications in industry. In addition, Effective FMEAs covers: The basics of FMEAs and risk assessment How to apply key factors for effective FMEAs and prevent the most common errors What is needed to provide excellent FMEA facilitation Implementing a "best practice" FMEA process Everyone wants to support the accomplishment of safe and trouble-free products and processes while generating happy and loyal customers. This book will show readers how to use FMEA to anticipate and prevent problems, reduce costs, shorten product development times, and achieve safe and highly reliable products and processes.

Reliability and Ecological Aspects of Photovoltaic Modules John Wiley & Sons
A one-stop reference guide to design for safety principles and applications Design for Safety (DfSa) provides design engineers and engineering managers with a range of tools and techniques for incorporating safety into the design process for complex systems. It explains how to design for maximum safe conditions and minimum risk of accidents. The book covers safety design practices, which will result in improved safety, fewer accidents, and substantial savings in life cycle costs for producers and users. Readers who apply DfSa principles can expect to have a dramatic improvement in the ability to compete in global markets. They will also find a wealth of design practices not covered in typical engineering books—allowing them to think outside the box when developing safety requirements. Design Safety is already a high demand field due to its importance to system design and will be even more vital for engineers in multiple design disciplines as more systems become increasingly complex and liabilities increase. Therefore, risk mitigation methods to design systems with safety features are becoming more important. Designing systems for safety has been a high priority for many safety-critical systems—especially in the aerospace and military industries. However, with the expansion of technological innovations into other market places, industries that had not previously considered safety design requirements are now using the technology in applications. Design for Safety: Covers trending topics and the latest technologies Provides ten paradigms for managing and designing systems for safety and uses them as guiding themes throughout the book Logically defines the parameters and concepts, sets the safety program and requirements, covers basic methodologies, investigates lessons from history, and addresses specialty topics within the topic of Design for Safety (DfSa) Supplements other books in the series on Quality and Reliability Engineering Design for Safety is an ideal book for new and experienced engineers and managers who are involved with design, testing, and maintenance of safety critical applications. It is also helpful for advanced undergraduate and postgraduate students in engineering. Design for Safety is the second in a series of “Design for” books. Design for Reliability was the first in the series with more planned for the future.
A Practical Guide, Third Edition John Wiley & Sons
The managed flow of goods and information from raw material to final sale also known as a "supply chain" affects everything--from the U.S. gross domestic product to where you can buy your jeans. The nature of a company's supply chain has a significant effect on its success or failure--as in the success of Dell Computer's make-to-order system and the failure of General Motor's vertical integration during the 1998 United Auto Workers strike. Supply Chain Integration looks at this crucial component of business at a time when product design, manufacture, and delivery are changing radically and globally. This book explores the benefits of continuously improving the relationship between the firm, its suppliers, and its customers to ensure the highest added value. This book identifies the state-of-the-art developments that contribute to the success of vertical tiers of suppliers and relates these developments to the capabilities that small and medium-sized manufacturers must have to be viable participants in this system. Strategies for attaining these capabilities through manufacturing extension centers and other technical assistance providers at the national, state, and local level are suggested. This book identifies action steps for small and medium-sized manufacturers--the "seed corn" of business start-up and development--to improve supply chain management. The book examines supply chain models from consultant firms, universities, manufacturers, and associations. Topics include the roles of suppliers and other supply chain participants, the rise of outsourcing, the importance of information management, the natural tension between buyer and seller, sources of assistance to small and medium-sized firms, and a host of other issues. Supply Chain Integration will be of interest to industry policymakers, economists, researchers, business leaders, and forward-thinking executives.
50 Ways to Improve Product Reliability John Wiley & Sons
Reliability of Semiconductor Lasers and Optoelectronic Devices simplifies complex concepts of optoelectronics reliability with approachable introductory chapters and a focus on real-world applications. This book provides a brief look at the fundamentals of laser diodes, introduces reliability qualification, and then presents real-world case studies discussing the principles of reliability and what occurs when these rules are broken. Then this book comprehensively looks at optoelectronics devices and the defects that cause premature failure in them and how to control those defects. Key materials and devices are reviewed including silicon photonics, vertical-cavity surface-emitting lasers (VCSELs), InGaN LEDs and lasers, and AlGaN LEDs, covering the majority of optoelectronic devices that we use in our everyday lives, powering the Internet, telecommunication, solid-state lighting, illuminators, and many other applications. This book features contributions from experts in industry and academia working in these areas and includes numerous practical examples and case studies. This book is suitable for new entrants to the field of optoelectronics working in R&D. • Includes case studies and numerous examples showing best practices and common mistakes affecting optoelectronics reliability written by experts working in the industry • Features the first wide-ranging and comprehensive overview of fiber optics reliability engineering, covering all elements of the practice from building a reliability laboratory, qualifying new products, to improving reliability on mature products. • Provides a look at the reliability issues and failure mechanisms for silicon photonics, VCSELs, InGaN LEDs and lasers, AlGaN LEDs, and more.
Reliability Analysis, Safety Assessment and Optimization John Wiley & Sons
The global implications of China’s rise as a global actor In 2005, a senior official in the George W. Bush administration expressed the hope that China would emerge as a “responsible stakeholder” on the world stage. A dozen years later, the Trump administration dramatically shifted course, instead calling China a “strategic competitor” whose actions routinely threaten U.S. interests. Both assessments reflected an underlying truth: China is no longer just a “rising” power. It has emerged as a truly global actor, both economically and militarily. Every day its actions affect nearly every region and every major issue, from climate change to trade, from conflict in troubled lands to competition over rules that will govern the uses of emerging technologies. To better address the implications of China’s new status, both for American policy and for the broader international order, Brookings scholars conducted research over the past two years, culminating in a project: Global China: Assessing China’s Growing Role in the World. The project is intended to furnish policy makers and the public with hard facts and deep insights for understanding China’s regional and global ambitions. The initiative draws not only on Brookings’s deep bench of China and East Asia experts, but also on the tremendous breadth of the institution’s security, strategy, regional studies, technological, and economic development experts. Areas of focus include the evolution of China’s domestic institutions; great power relations; the emergence of critical technologies; Asian security; China’s influence in key regions beyond Asia; and China’s impact on global governance and norms. Global China: Assessing China’s Growing Role in the World provides the most current, broad-scope, and fact-based assessment of the implications of China’s rise for the United States and the rest of the world.
Standard & Poor's Stock Reports John Wiley & Sons Incorporated
Thermodynamic degradation science is a new and exciting discipline. This book merges the science of physics of failure with thermodynamics and shows how degradation modeling is improved and enhanced when using thermodynamic principles. The author also goes beyond the traditional physics of failure methods and highlights the importance of having new tools such as “Mesoscopic” noise degradation measurements for prognostics of complex systems, and a conjugate work approach to solving physics of failure problems with accelerated testing applications. Key features: • Demonstrates how the thermodynamics energy approach uncovers key degradation models and their application to accelerated testing. • Demonstrates how thermodynamic degradation models accounts for cumulative stress environments, effect statistical reliability distributions, and are key for reliability test planning. • Provides coverage of the four types of Physics of Failure processes describing aging: Thermal Activation Processes, Forced Aging, Diffusion, and complex combinations of these. • Coverage of numerous key topics including: aging laws; Cumulative Accelerated Stress Test (CAST) Plans; cumulative entropy fatigue damage; reliability statistics and environmental degradation and pollution. Thermodynamic Degradation Science: Physics of Failure, Accelerated Testing, Fatigue and Reliability Applications is essential reading for reliability, cumulative fatigue, and physics of failure engineers as well as students on courses which include thermodynamic engineering and/or physics of failure coverage.
The New Climate War John Wiley & Sons
DESIGN FOR EXCELLENCE IN ELECTRONICS MANUFACTURING An authoritative guide to optimizing design for manufacturability and reliability from a team of experts Design for Excellence in Electronics Manufacturing is a comprehensive, state-of-the-art book that covers design and reliability of electronics. The authors—noted experts on the topic—explain how using the DfX concepts of design for reliability, design for manufacturability, design for environment, design for testability, and more, reduce research and development costs and decrease time to market and allow companies to confidently issue warranty coverage. By employing the concepts outlined in Design for Excellence in Electronics Manufacturing, engineers and managers can increase customer satisfaction, market share, and long-term profits. In addition, the authors describe the best practices regarding product design and show how the practices can be adapted for different manufacturing processes, suppliers, use environments, and reliability expectations. This important book: Contains a comprehensive review of the design and reliability of electronics Covers a range of topics: establishing a reliability program, design for the use environment, design for manufacturability, and more Includes technical information on electronic packaging, discrete components, and assembly processes Shows how aspects of electronics can fail under different environmental stresses Written for reliability engineers, electronics engineers, design engineers, component engineers, and others, Design for Excellence in Electronics Manufacturing is a comprehensive book that reveals how to get product design right the first time.
New York Stock Exchange, American Stock Exchange, Nasdaq Stock Market and regional exchanges Wiley
Covering the major topics in lead-free soldering Lead-free Soldering Process Development and Reliability provides a comprehensive discussion of all modern topics in lead-free soldering. Perfect for process, quality, failure analysis and reliability engineers in production industries, this reference will help practitioners address issues in research, development and production. Among other topics, the book addresses: · Developments in process engineering (SMT, Wave, Rework, Paste Technology) · Low temperature, high temperature and high reliability alloys · Intermetallic compounds · PCB surface finishes and laminates · Underfills, encapsulants and conformal coatings · Reliability assessments In a regulatory environment that includes the adoption of mandatory lead-free requirements in a variety of countries, the book’s explanations of high-temperature, low-temperature, and high-reliability lead-free alloys in terms of process and reliability implications are invaluable to working engineers. Lead-free Soldering takes a forward-looking approach, with an eye towards developments likely to impact the industry in the coming years. These will include the introduction of lead-free requirements in high-reliability electronics products in the medical, automotive, and defense industries. The book provides practitioners in these and other segments of the industry with guidelines and information to help comply with these requirements.
Strategies for Small Manufacturers Next Generation HALT and HASSRobust Design of Electronics and Systems
Twenty five years ago, it didn't exist. Today, twenty million people worldwide are surfing the Net. Where Wizards Stay Up Late is the exciting story of the pioneers responsible for creating the most talked about, most influential, and most far-reaching communications breakthrough since the invention of the telephone. In the 1960's, when computers where regarded as mere giant calculators, J.C.R. Licklider at MIT saw them as the ultimate communications devices. With Defense Department funds, he and a band of visionary computer whizzes began work on a nationwide, interlocking network of computers. Taking readers behind the scenes, Where Wizards Stay Up Late captures the hard work, genius, and happy accidents of their daring, stunningly successful venture.
Reliability Engineering and Services Simon and Schuster
How to design for optimum maintenance capabilities and minimize the repair time Design for Maintainability offers engineers a wide range of tools and techniques for incorporating maintainability into the design process for complex systems. With contributions from noted experts on the topic, the book explains how to design for optimum maintenance capabilities while simultaneously minimizing the time to repair equipment. The book contains a wealth of examples and the most up-to-date maintainability design practices that have proven to result in better system readiness, shorter downtimes, and substantial cost savings over the entire system life cycle, thereby, decreasing the Total Cost of Ownership. Design for Maintainability offers a wealth of design practices not covered in typical engineering books, thus allowing readers to think outside the box when developing maintainability design requirements. The books principles and practices can help engineers to dramatically improve their ability to compete in global markets and gain widespread customer satisfaction. This important book: Offers a complete overview of maintainability engineering as a system engineering discipline Includes contributions from authors who are recognized leaders in the field Contains real-life design examples, both good and bad, from various industries Presents realistic illustrations of good maintainability design principles Provides discussion of the interrelationships between maintainability with other related disciplines Explores trending topics in technologies Written for design and logistic engineers and managers, Design for Maintainability is a comprehensive resource of the most reliable techniques for creating maintainability in when designing a product.
Practical Applications of Bayesian Reliability Happy About
By outlining how reliability engineering practices fit within a product development program, the

reader will have a better understanding of how roles and goals align with the program and how this applies to their specific role. Reliability Culture: How Leaders Build Organizations that Create Reliable Products, will help readers develop a deep understanding of reliability, including what it really means for organizations, how to implement it in daily operations, and, most importantly, how to build a culture that is centered around reliability and can generate impressive profits. When senior leaders work toward reliability, product details often get lost in translation. This book will enable organizations to overcome this problem by showing leaders how their actions truly affect product development. They will be introduced to new methods that will immediately enable them to have carefully crafted product specifications translated into matching, highly reliable products. This book will also be a breath of fresh air for reliability engineers and managers; they will see their daily struggle identified and will learn new methods for advancing their passionate struggle. These new methods will be clearly explained, so readers can begin the important process of incorporating and promoting reliability in their organizations. Benefits of this book include: For the organizational leader, this book provides tools for aligning reliability objectives and methods with the company's business and brand goals For the reliability engineer, this book identifies and proposes solutions for integrating their discipline within the larger program objective and activities Engineers and leaders alike will benefit from detailed discussions of product negotiation, program assessment, culture change methods, and more All readers will understand the progression of product design methods over the previous decades, including how market acceptance is changing Reliability Culture: How Leaders Build Organizations that Create Reliable Products is intended for a broad audience that includes organizational leaders, engineers of all disciplines, project managers, and business development partners. The book is aimed at outlining how reliability engineering practices fit with all program activities, so any team members will benefit.

Reliability of High-Power Mechatronic Systems 2 Brookings Institution Press

The authoritative guide to the effective design and production of reliable technology products, revised and updated While most manufacturers have mastered the process of producing quality products, product reliability, software quality and software security has lagged behind. The revised second edition of Improving Product Reliability and Software Quality offers a comprehensive and detailed guide to implementing a hardware reliability and software quality process for technology products. The authors – noted experts in the field – provide useful tools, forms and spreadsheets for executing an effective product reliability and software quality development process and explore proven software quality and product reliability concepts. The authors discuss why so many companies fail after attempting to implement or improve their product reliability and software quality program. They outline the critical steps for implementing a successful program. Success hinges on establishing a reliability lab, hiring the right people and implementing a reliability and software quality process that does the right things well and works well together. Designed to be accessible, the book contains a decision matrix for small, medium and large companies. Throughout the book, the authors describe the hardware reliability and software quality process as well as the tools and techniques needed for putting it in place. The concepts, ideas and material presented are appropriate for any organization. This updated second edition: Contains new chapters on Software tools, Software quality process and software security. Expands the FMEA section to include software fault trees and software FMEAs. Includes two new reliability tools to accelerate design maturity and reduce the risk of premature wearout. Contains new material on preventative maintenance, predictive maintenance and Prognostics and Health Management (PHM) to better manage repair cost and unscheduled downtime. Presents updated information on reliability modeling and hiring reliability and software engineers. Includes a comprehensive review of the reliability process from a multi-disciplinary viewpoint including new material on uprating and counterfeit components. Discusses aspects of competition, key quality and reliability concepts and presents the tools for implementation. Written for engineers, managers and consultants lacking a background in product reliability and software quality theory and statistics, the updated second edition of Improving Product Reliability and Software Quality explores all phases of the product life cycle.

Cultural Studies Perspectives on War John Wiley & Sons

Demonstrates how to solve reliability problems using practical applications of Bayesian models This self-contained reference provides fundamental knowledge of Bayesian reliability and utilizes numerous examples to show how Bayesian models can solve real life reliability problems. It teaches engineers and scientists exactly what Bayesian analysis is, what its benefits are, and how they can apply the methods to solve their own problems. To help readers get started quickly, the book presents many Bayesian models that use JAGS and which require fewer than 10 lines of command. It also offers a number of short R scripts consisting of simple functions to help them become familiar with R coding. Practical Applications of Bayesian Reliability starts by introducing basic concepts of reliability engineering, including random variables, discrete and continuous probability distributions, hazard function, and censored data. Basic concepts of Bayesian statistics, models, reasons, and theory are presented in the following chapter. Coverage of Bayesian computation, Metropolis-Hastings algorithm, and Gibbs Sampling comes next. The book then goes on to teach the concepts of design capability and design for reliability; introduce Bayesian models for estimating system reliability; discuss Bayesian Hierarchical Models and their applications; present linear and logistic regression models in Bayesian Perspective; and more. Provides a step-by-step approach for developing advanced reliability models to solve complex problems, and does not require in-depth understanding of statistical methodology Educates managers on the potential of Bayesian reliability models and associated impact Introduces commonly used predictive reliability models and advanced Bayesian models based on real life applications Includes practical guidelines to construct Bayesian reliability models along with computer codes for all of the case studies JAGS and R codes are provided on an accompanying website to enable practitioners to easily copy them and tailor them to their own applications Practical Applications of Bayesian Reliability is a helpful book for industry practitioners such as reliability engineers, mechanical engineers, electrical engineers, product engineers, system engineers, and materials scientists whose work includes predicting design or product performance.

Culture, Trauma, and Conflict Wiley

This second volume of a series dedicated to the reliability of high-power mechatronic systems focuses specifically on issues, testing and analysis in automotive and aerospace applications. In the search to improve industrial competitiveness, the development of methods and tools for the design of products is especially pertinent in the context of cost reduction. This book proposes new methods that simultaneously allow for a quicker design of future mechatronic devices in the automotive and aerospace industries while guaranteeing their increased reliability. The reliability of these critical elements is further validated digitally through new multi-physical and probabilistic models that could ultimately lead to new design standards and reliable forecasting. Presents a methodological guide that demonstrates the reliability of fractured mechatronic components and devices Includes numerical and statistical models to optimize the reliability of the product architecture Develops a methodology to characterize critical elements at the earliest stage in their development

Proceedings of ESREL 2018, June 17-21, 2018, Trondheim, Norway John Wiley & Sons

Offers a holistic approach to guiding product design, manufacturing, and after-sales support as the manufacturing industry transitions from a product-oriented model to service-oriented paradigm This book provides fundamental knowledge and best industry practices in reliability modelling, maintenance optimization, and service parts logistics planning. It aims to develop an integrated product-service system (IPSS) synthesizing design for reliability, performance-based maintenance, and spare parts inventory. It also presents a lifecycle reliability-inventory optimization framework where reliability, redundancy, maintenance, and service parts are jointly coordinated. Additionally, the book aims to report the latest advances in reliability growth planning, maintenance contracting and spares inventory logistics under non-stationary demand condition. Reliability Engineering and Service provides in-depth chapter coverage of topics such as: Reliability Concepts and Models; Mean and Variance of Reliability Estimates; Design for Reliability; Reliability Growth Planning; Accelerated Life Testing and Its Economics; Renewal Theory and Superimposed Renewals; Maintenance and Performance-Based Logistics; Warranty Service Models; Basic Spare Parts Inventory Models; Repairable Inventory Systems; Integrated Product-Service Systems (IPPS), and Resilience Modeling and Planning Guides engineers to design reliable products at a low cost Assists service engineers in providing superior after-sales support Enables managers to respond to the changing market and customer needs Uses end-of-chapter case studies to illustrate industry best practice Lifecycle approach to reliability, maintenance and spares provisioning Reliability Engineering and Service is an important book for graduate engineering students, researchers, and industry-based reliability practitioners and consultants.

Where Wizards Stay Up Late John Wiley & Sons

A comprehensive guide to the application and processing of condition-based data to produce prognostic estimates of functional health and life. Prognostics and Health Management provides an authoritative guide for an understanding of the rationale and methodologies of a practical approach for improving system reliability using conditioned-based data (CBD) to the monitoring and management of health of systems. This proven approach uses electronic signatures extracted from conditioned-based electrical signals, including those representing physical components, and employs processing methods that include data fusion and transformation, domain transformation, and normalization, canonicalization and signal-level translation to support the determination of predictive diagnostics and prognostics. Written by noted experts in the field, Prognostics and Health Management clearly describes how to extract signatures from conditioned-based data using conditioning methods such as data fusion and transformation, domain transformation, data type transformation and indirect and differential comparison. This important resource: Integrates data collecting, mathematical modelling and reliability prediction in one volume Contains numerical examples and problems with solutions that help with an understanding of the algorithmic elements and processes Presents information from a panel of experts on the topic Follows prognostics based on statistical modelling, reliability modelling and usage modelling methods Written for system engineers working in critical process industries and automotive and aerospace designers, Prognostics and Health Management offers a guide to the application of condition-based data to produce signatures for input to predictive algorithms to produce prognostic estimates of functional health and life.

Champions of the Force Asq Press

The design and manufacture of reliable products is a major challenge for engineers and managers. This book arms technical managers and engineers with the tools to compete effectively through the design and production of reliable technology products.

Strategies and Implementation Elsevier

By outlining how reliability engineering practices fit within a product development program, the reader will have a better understanding of how roles and goals align with the program and how this applies to their specific role. Reliability Culture: How Leaders Build Organizations that Create Reliable Products, will help readers develop a deep understanding of reliability, including what it really means for organizations, how to implement it in daily operations, and, most importantly, how to build a culture that is centered around reliability and can generate impressive profits. When senior leaders work toward reliability, product details often get lost in translation. This book will enable organizations to overcome this problem by showing leaders how their actions truly affect product development. They will be introduced to new methods that will immediately enable them to have carefully crafted product specifications translated into matching, highly reliable products. This book will also be a breath of fresh air for reliability engineers and managers; they will see their daily struggle identified and will learn new methods for advancing their passionate struggle. These new methods will be clearly explained, so readers can begin the important process of incorporating and promoting reliability in their organizations. Benefits of this book include: For the organizational leader, this book provides tools for aligning reliability objectives and methods with the companys business and brand goals For the reliability engineer, this book identifies and proposes solutions for integrating their discipline within the larger program objective and activities Engineers and leaders alike will benefit from detailed discussions of product negotiation, program assessment, culture change methods, and more All readers will understand the progression of product design methods over the previous decades, including how market acceptance is changing Reliability Culture: How Leaders Build Organizations that Create Reliable Products is intended for a broad audience that includes organizational leaders, engineers of all disciplines, project managers, and business development partners. The book is aimed at outlining how reliability engineering practices fit with all program activities, so any team members will benefit.

National Defense Authorization Act for Fiscal Year 2014 John Wiley & Sons

Accelerated Reliability Engineering Halt and Hass Gregg K. Hobbs Hobbs Engineering Corporation, Westminster, Colorado, USA Accelerated reliability engineering is becoming a popular industry alternative to on-going product quality testing. Highly Accelerated Life Tests (HALT) and Highly Accelerated Stress Screens (HASS) are intensive methods which use stresses higher than the field environments to expose and then improve design and process weaknesses. HALT and HASS offer faster, cheaper and more accurate results than traditional reliability testing techniques. This book provides comprehensive coverage of the methods and philosophy behind this successful approach. Production managers will appreciate the time-saving and cost-effective testing techniques described. Design engineers involved in quality assurance and students of reliability engineering will benefit from this unique resource detailing the technical aspects of accelerated reliability engineering. Features Include: * Coverage of the physics of failure and useful testing equipment

enabling those new to the area to grasp the concepts behind HALT and HASS * Overview of the HALT technique demonstrating how to find design and process defects quickly using accelerated stress methodology during the design phase of the project * Examination of detection screens and modulated excitation used to detect flaws exposed in HALT * Description of how to set up a HASS profile and how to minimize costs whilst retaining efficiency * Applications of HALT and HASS and analysis of common mistakes highlighting the pitfalls to avoid when implementing the methods Wiley Series in Ouality and Reliability Engineering Visit Or Web Page! http://www.wiley.com/