

### Statistical Engineering: An Algorithm for Reducing Variation in Manufacturing Processes

Stefan H. Steiner and R. Jock MacKay

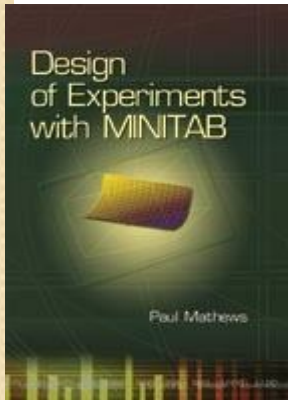
Reducing the variation in process outputs is a key part of process improvement. For mass produced components and assemblies, reducing variation can simultaneously reduce overall cost, improve function, and increase customer satisfaction with the product.

The authors have structured this book around an algorithm for reducing process variation that they call statistical engineering. The algorithm is designed to solve chronic problems on existing high to medium volume manufacturing and assembly processes. The fundamental basis for the algorithm is the belief that we will discover cost effective changes to the process that will reduce variation if we increase our knowledge of how and why a process behaves as it does. A key way to increase process knowledge is to learn empirically, that is, to learn by observation and experimentation. The authors discuss in detail a framework for planning and analyzing empirical investigations, known by its initialism QPDAC (question, plan, data, analysis, conclusion). They classify all effective ways to reduce variation into seven approaches. A unique aspect of the algorithm forces early consideration of the feasibility of each of the approaches.

2005 kovakantinen 360 sivua

Tilausnumero: H1212

ISBN 978-0-87389-646-7



### Design of Experiments with MINITAB

Paul Mathews

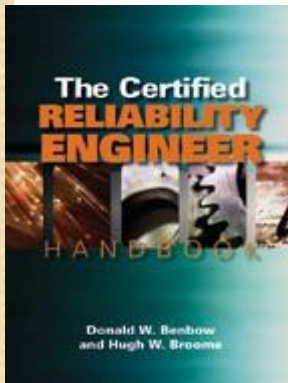
Most of the classic design of experiments books were written before DOE software was generally available, so the technical level that they assumed was that of the engineer or scientist who had to write his or her own analysis software. In this practical introduction to DOE, guided by the capabilities of the common software packages, Paul Mathews presents the basic types and methods of designed experiments appropriate for engineers, scientists, quality engineers, and Six Sigma Black Belts and Master Black Belts. Although instructions in the use of MINITAB are detailed enough to provide effective guidance to a new MINITAB user, the book is still general enough to be very helpful to users of other DOE software packages.

Every chapter contains many examples with detailed solutions including extensive output from MINITAB.

2005 kovakantinen 520 sivua

Tilausnumero: H1233

ISBN 978-0-87389-637-5



### The Certified Reliability Engineer Handbook

Donald W. Benbow and Hugh W. Broome

This handbook provides engineers with the theory and tools needed to meet ever-increasing reliability requirements. Its chapters and sections match the body of knowledge (BoK) specified for ASQ's Certified Reliability Engineer certification. An accompanying CD-ROM contains supplementary problems covering each chapter and a simulated exam that has problems distributed among the chapters according to the scheme published in the BoK.

2008 kovakantinen 300 sivua

Tilausnumero: H1304

ISBN 978-0-87389-721-1



### Fundamental Concepts for the Software Quality Engineer, Volume 2

Sue Carroll and Taz Daughtrey

This volume provides selected articles gathered from the last five volumes of *Software Quality Professional (SQP)*, a peer-reviewed quarterly publication applying quality principles to the development and use of software and software-based systems. This collection of articles provides you with insights from authors around the world which is vital in today's global economy. As with SQP and this series' first volume, this book follows the categories of the ASQ Certified Software Quality Engineer Body of Knowledge. The articles are each related to one of the seven knowledge areas and provided in numbers proportional to the relative weights assigned to each category in the certification exam.

2007 pehmeäkantinen 376 sivua

Tilausnumero: H1313

ISBN 978-0-87389-720-4



### The Certified Software Quality Engineer Handbook

Linda Westfall, editor

This brand-new handbook is an invaluable resource for the CSQE exam and also as a desk reference on the job. Organized to follow the certification's body of knowledge, guidance is given on software quality development and implementation, software inspection, testing, verification and validation, configuration management, the management and maintenance of quality processes and methods, and much more. An essential reference for any software quality engineer.

2008 kovakantinen 250 sivua

Tilausnumero: H1323

ISBN 978-0-87389-730-3



### The Certified Quality Engineer Handbook, Third Edition

Connie M. Borrer, editor

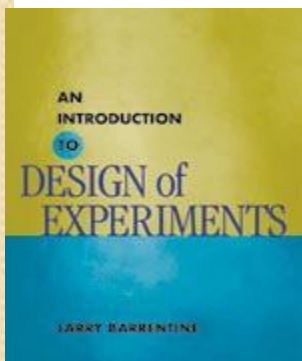
This third edition provides the quality professional with an updated resource that exactly follows ASQ's Certified Quality Engineer (CQE) Body of Knowledge. Today it is not uncommon for the quality engineer to be involved in quality improvement activities in healthcare, finance, education, software applications, and other non-manufacturing sectors. In response, numerous new examples and illustrations that cover applications in some of these areas have been added. Key features of the third edition include:

New and updated references Extensive revision of the statistical methods, complete with numerous updated examples and illustrations Over 75 new glossary entries This handbook can be used in preparation for the CQE exam or as a reference text for professional development. When a complete description or discussion of a topic is beyond the scope of the handbook, useful references have been included for further reading. Quality engineers will find this book to be an indispensable addition to their libraries.

2009 kovakantinen 696 sivua

Tilausnumero: H1340

ISBN 978-0-87389-745-7



### Introduction to Design of Experiments: A Simplified Approach

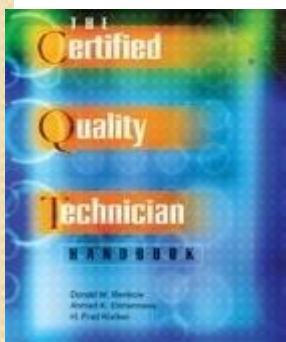
Larry B. Barrentine

Are you aware of how design of experiments can positively affect your work? Have you been avoiding it due to its mathematical structure? Now there is a tool that explains the basics of DOE with little mathematical know-how while maintaining statistical correctness. By minimizing DOE's mathematics in favor of a logical, structured approach, the author demonstrates that nearly anyone can adapt DOE to their needs. You'll find yourself working through the book in a step-by-step manner allowing you to immediately apply what you've learned to your own situation. Each procedure is illustrated by an example. Case studies and exercises guide you through the book to help you evaluate your understanding before moving ahead to another section. A glossary of common DOE terms is also included making this one of the most thorough, basic, introductions to this useful tool.

1999 pehmeäkantinen 114 sivua

Tilausnumero: H1016

ISBN 978-0-87389-444-9



### The Certified Quality Technician Handbook

Donald W. Benbow, Ahmad K. Elshennawy, and H. Fred Walker

Those interested in auditing, design of experiments, management, quality costs, sampling, and reliability will find this text helpful. Whether you want to brush up on skills needed in your profession, or review material before taking the Certified Quality Technician exam, this guide can help. Readers do not need a formal statistical background nor is it necessary to attend a course before using this book. This guide can also help an engineer or quality professional brush up on skills required for one's job due to newly assigned responsibilities. The CD-ROM included contains a Certified Quality Technician sample exam, with problems organized to correspond to the body of knowledge for the ASQ certification.

2003 kovakantinen 232 sivua

Tilausnumero: H1146

ISBN 978-0-87389-558-3



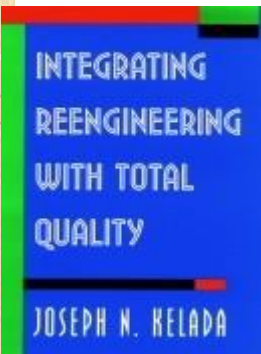
### Quality Engineering Statistics

*Dovich, Robert A.*

This book is a compendium of many of the statistical tools and tests used by quality and engineering professionals. It is a practical handbook that lists significant statistical methods, outlines assumptions for testing, and provides formulas and completed examples. The book is ideal for engineers who know what type of test to perform but need an easy-to-use reference to help complete the task. Readers should have an understanding of basic statistics. A bibliography contains references to texts that can provide the necessary theory and mathematical foundations. Includes 16 distribution tables

111 sivua. ISBN 0873891414. Pehmeäkantinen. 1992

**Tilausnumero:** H0679



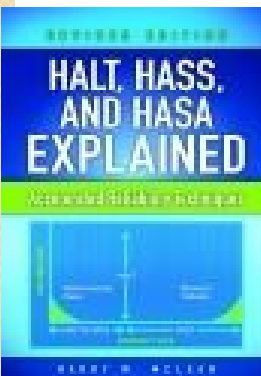
### Integrating Reengineering with Total Quality

*Kelada, Joseph N.*

This groundbreaking book unites total quality and reengineering into one integrated management approach to positively impact an organization to survive and compete in the twenty-first century. The author clearly explains many trends in management practices, such as activity-based costing, activity-based management, and mass customization. He integrates them into a unique, global approach that introduces his new idea of the total quality triad and QVALITY (quality, volume, administration, location, interrelationships/image, timely, and yield) and ACE concepts. This approach aims for the mutual satisfaction of the shareholders, customers, and people associated with your organization.

481 sivua. ISBN 978-0-87389-339-8. Kovakantinen. 1996

**Tilausnumero:** H0896



### HALT, HASS, and HASA Explained: Accelerated Reliability Techniques, Revised Edition

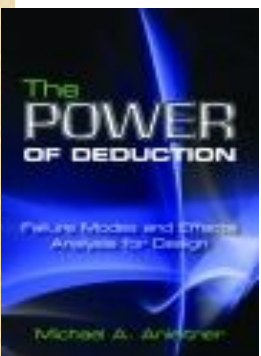
*Harry W. McLean*

**Tilausnumero:** H1365

208 sivua.. ISBN 978-0-87389-766-2. Kovakantinen. 2009

Readers will find all that is required to implement a successful accelerated reliability program in this groundbreaking book. It has been prepared with both novices and experts in mind. It has been written so that either can find information that will aid them in their quest to produce high-reliability products without getting bogged down in equations. HALT, a process for the ruggedization of preproduction products, and HASS, the production screen for the products once they have been characterized in HALT, are the primary focal points in this book. For those wishing to delve into more advanced topics, three versions of a production audit, HASA, are also included. These may be of interest to the high-volume producer or to those who wish to audit their overall production processes rather than to screen all of the products.

Author Harry McLean shares the knowledge he has acquired in helping employers and clients manufacture products which far exceeded stated reliability expectations as soon as they were released into production. Many who are using these techniques are included in the world's top 50 electronic and electromechanical companies and have seen their market share climb from "the dust in the rear of the pack" to be the industry leader in a short time. Others have used HALT, HASS, and HASA techniques to increase warranty coverage for their products three times the industry norm and still reduce their overall warranty expense as well as to dramatically increase their market share



### The Power of Deduction: Failure Modes and Effects Analysis for Design

*Michael A. Anleitner*

**Tilausnumero:** H1397

If you really want to improve product designs, you must do more than conceive and develop ideas using intuitive and inductive thinking. While innovation and creativity—which are driven by insight and inductive generalizations—are critically important in today's competitive world, inspired ideas that are not executed with exquisite attention to detail are, more often than not, doomed to the scrap heap of history. That's where a design failure modes and effects analysis (DFMEA) comes in. But like anything, it has to be done well. Even with a clever or exciting design, a poorly developed DFMEA means that there will likely be serious problems with the design, either during the development cycle or after customers begin to use the product, or both.

How can you turn DFMEA into the powerful tool that it can become? How should DFMEA be approached? This book answers these questions. It introduces DFMEA, outlines some common mistakes made when doing it, and goes deep into a straightforward but comprehensive 7-step process that will ensure your designs and products are world-class.



### Concepts for R&R Studies, Second Edition

Larry B. Barrentine

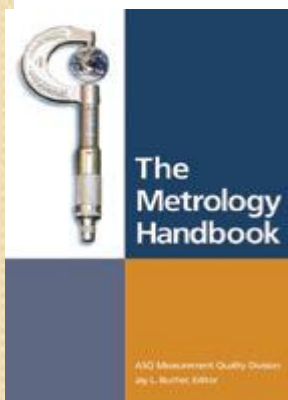
Methods used to evaluate R&R studies have changed since the first edition was first published. This second edition provides instruction that reflects current manufacturing practices. The relationship of the two basic measurement capability indexes and process capability has been clarified in this new edition. Since the last edition, using software to analyze statistics has become a more common practice. Barrentine demonstrates examples of the proper methods for applying statistical software to R&R studies.

Reading this book will give you an understanding of how measurement relates to reported processes, knowledge about how to assess your organization's measurement system, and directions to establish priorities and develop action plans that will effectively address measurement problems. This book assumes that process engineers, quality professionals, technical managers, and process managers in manufacturing industries are already familiar with basic SPC. Barrentine updated this guide to reflect current assessment practices, the use of software, the interrelationship of measurement indexes, and process capability related to R&R studies.

2003 *pehmeäkantinen* 84 sivua

Tilausnumero:: H1149

ISBN 978-0-87389-557-6



### The Metrology Handbook

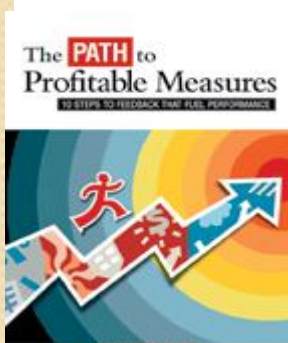
Jay Bucher, editor

Many of the topics listed in the Certified Calibration Technician (CCT) Body of Knowledge are presented in this comprehensive book which serves as an excellent reference to prepare for the certification exam. This book provides an overview of metrology and calibration principles and practices geared toward intermediate and advanced users with a basic understanding of the subject matter. Examples and figures are used throughout the book to aid in practical application of the material along with a list of helpful acronyms and abbreviations, a glossary of terms, and a bibliography for easy reference.

2004 *kovakantinen* 560 sivua

Tilausnumero:: H1215

ISBN 978-0-87389-620-7



### The Path to Profitable Measures: 10 Steps to Feedback That Fuels Performance

Mark W. Morgan

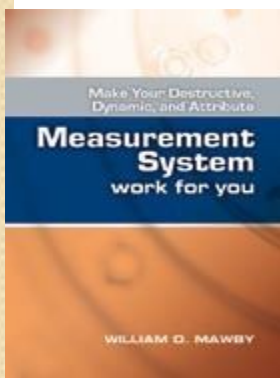
Most managers suffer from data glut and information famine. The constant stream of reports, e-mails, phone calls, and meetings usually fails to provide the feedback busy people need to make rapid and meaningful decisions. Most managers would love to cut through the clutter and see true results. However, they are usually victims of information systems that have evolved over time without careful thought. The result is floods of reports and reviews—with only trickles of meaningful information and useful feedback.

*The Path to Profitable Measures teaches 10 simple steps to turn your information flood into meaningful feedback for you and your work team.*

2005 *pehmeäkantinen* 130 sivua

Tilausnumero: H1240

ISBN 978-0-87389-649-8



### Make Your Destructive, Dynamic, and Attribute Measurement System Work for You

William D. Mawby

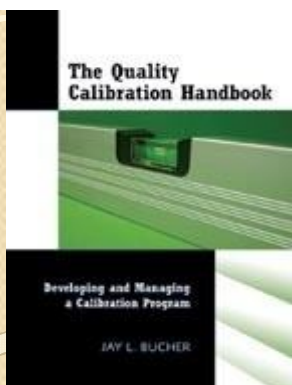
The motivation for this book comes from the author's extensive experience with trying to apply the standard measurement systems analysis methods to real-world problems that arise in manufacturing and industry. The methods work well for simple systems that are not dynamic and have only two significant sources of error, but leave a lot to be desired in other circumstances. This shortfall is especially clear in the case of attribute measurement systems analysis in which the standard method is far from adequate.

This book provides clear procedures for situations in which the part values change or are destroyed. It also provides procedures that work when the measurements are dynamic and cannot be separated from the process. It extends the simple methods to cases in which the measurement systems have several sources of uncertainty. And it completely overhauls the attribute methodology and enables it for many difficult but practical applications

2006 *pehmeäkantinen* 232 sivua

Tilausnumero: H1282

ISBN 978-0-87389-691-7



## The Quality Calibration Handbook: Developing and Managing a Calibration Program

Jay L. Bucher

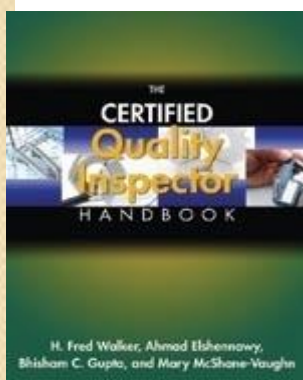
If a business expects to be a player in its market segment, its product(s) must have the quality expected by their customers. This can only be accomplished with test equipment that produces repeatable, accurate, and traceable measurements and/or outputs. Without a quality calibration system in place, this cannot and will not happen.

This book is about how to design, implement, maintain, and continuously improve a quality calibration system, with all the required documentation, traceability, and known uncertainty for each and every item of test equipment owned and used by any company, large or small. It will benefit companies that want to implement a program and also those that already have one in place. Quality calibration systems are the very foundation for improving research and development, production, and quality assurance arenas through accurate, reliable, and traceable calibrations of their test equipment. By ensuring the calibration of test equipment used in the production of genetic identity kits used by law enforcement at crime scenes, the guilty are often caught and the innocent exonerated. Calibrated test equipment used in support of the airline and automotive industries helps prevent disasters. At pharmaceutical companies, calibration technicians quietly lay the foundation for quality treatments that help keep us healthy, cure diseases, and sometimes prevent death.

2007 kovakantinen 190 sivua

Tilausnumero: H1293

ISBN 978-0-87389-704-4



## The Certified Quality Inspector Handbook

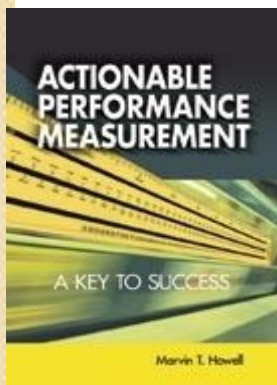
H. Fred Walker, Ahmad Elshennawy, Bhisam C. Gupta, and Mary McShane Vaughn

This new handbook follows exactly the CQI Body of Knowledge. It addresses all the topics critical to the work of quality inspectors: evaluating hardware documentation, performing laboratory procedures, inspecting products, measuring process performance, recording data and preparing formal reports, and much more. Including topics such as SPC, metrology, quality assurance, and gauges, this comprehensive reference will be used often.

2008 Kovakantinen 250 sivua

Tilausnumero: H1324

ISBN 978-0-87389-731-0



## Actionable Performance Measurement: A Key to Success

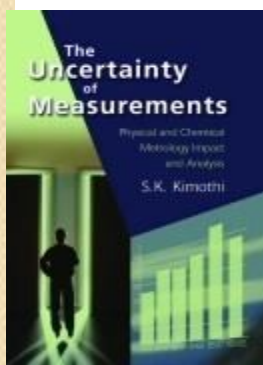
Marvin T. Howell

Measurement is absolutely essential for any organization or company, functional area, department, business unit, project, or individual. Companies must know how their processes are performing, how well they are meeting customers' needs, how targeted improvements are being achieved, and how management is doing. Accurate performance measures tell companies where they are, and to take action if they are not on track or if performance does not meet expectations.

*Actionable Performance Measurement presents many different methods to help readers develop metrics and performance measures. To aid in corporate measures development and strategic, tactical, and/or business planning, a quick and effective method of identifying specific key results areas is outlined and explained.*

2006 pehmeäkantinen 266 sivua ISBN 0-87389-664-5

Tilausnumero: H1260



## The Uncertainty of Measurements: Physical and Chemical Metrology: Impact and Analysis

Kimothi, S. K.

The uncertainty of measurement results is drawing attention of managers, metrologists and customers. The accuracy of measurements affects all of us in trade, commerce, safety, health care environmental protection and more. The quality of these measurements are regulated by a variety of government agencies. Measurement also plays an important role in manufacturing and service organizations. Use this book to learn more about metrology and the need for reliable measurements. You can also learn about measurement system and quality of measurement systems, objectives and methods. Statistical techniques in metrology are also explained. Examples of measurement data and random variables, probability density functions, sampling distribution, statistical estimation degrees of freedom and regression are included. An entire chapter is devoted to measurement errors.

416 sivua. ISBN 0873895355. Kovakantinen. 2002

Tilausnumero: H1112