Handbook Of Industrial Engineering Equations And Calculations

WILCOX FOLEY

Handbook of Measurements McGraw-Hill Professional Pub
This book deals with the improvement of suppliers in order to increase a company's top and bottom-line. The enhancement of suppliers can be accomplished in a series of steps when conditions warrant intervention. They can also be generated through direct quality mentoring when the supplier does not have the basic skills or abilities to adequately address impending problems. Also included are guideline activities which will aid in achieving and attaining improved profitability and competitiveness in the world market. Packed with examples, problems, and forms to allow easy establishment of systems, makes the information presented more easily understood, interesting, and useful.
Industrial Control Systems CRC Press
Although an integral part of the corporate world, the development and execution of a successful Environmental Safety and Health (ES&H) program in today’s profit-driven business climate is challenging and complex. Add to that the scarcity of resources available to assist managers in successfully designing and implementing these programs and you’ve got a perfect storm of regulatory and contractual agreements imposed on businesses. Guide to Environment Safety and Health Management: Developing, Implementing, and Maintaining a Continuous Improvement Program guides you through the challenges of developing and maintaining an effective ES&H program for any organization. A strategic ES&H program that follows project management concepts can add to the bottom line in many ways; however, the exact financial gain cannot oftentimes be quantified in the near term and in hard dollars. Written by two experts with more than 50 years of combined experience, this book covers the primary areas of ES&H and key elements that should be considered in developing, managing, and implementing an effective, compliant, and cost-effective program. Presenting information from a practical experience view, the book covers: Organizational structure and succession planning Fundamental understanding of EH&S functional areas Training Approach and measurement of continuous organizational improvement Project management of EH&S Application of technology Culture and trust in the workplace Regulatory applicability depends on the type of business, product produced, and potential impacts to employees, the public, and the environment. Additionally, the perception exists with some business owners and executives that the "rules and regulations" imposed or enforced do not directly add to the bottom line. Giving you practical, from-the-trenches knowledge, the book outlines techniques and provides guidance for addressing the challenges involved in setting up EH&S programs. It shows you how your ES&H program can ensure regulatory compliance and contribute to the success of your company both monetarily as well as in shaping public perception.
Handbook of Formulas and Techniques CRC Press
A new edition of a bestselling industrial and systems engineering reference, Handbook of Industrial and Systems Engineering, Second Edition provides students, researchers, and practitioners with easy access to a wide range of industrial engineering tools and techniques in a concise format. This

edition expands the breadth and depth of coverage, emp

Handbook of Construction Management CRC Press

Are projects a problem for you? Do your projects cost too much, take too long, or are just not quite right? If so, Project Management Simplified: A Step-by-Step Process is the book for you. It applies well-defined processes for managing projects to managing change in our lives. It describes an approach modeled on a process used successfully in busi

Design for Profitability CRC Press

Global Manufacturing Technology Transfer: Africa-USA Strategies, Adaptations, and Management presents practical strategies for developing and sustaining manufacturing technology transfers. It is particularly useful for helping developing nations achieve and sustain a solid footing of economic development through manufacturing. The book examines Afr

Productivity Theory for Industrial Engineering CRC Press

Graduate research is a complicated process, which many undergraduate students aspire to undertake. The complexity of the process can lead to failures for even the most brilliant students. Success at the graduate research level requires not only a high level of intellectual ability but also a high level of project management skills. Unfortunately, many graduate students have trouble planning and implementing their research. Project Management for Research: A Guide for Graduate Students reflects the needs of today's graduate students. All graduate students need mentoring and management guidance that has little to do with their actual classroom performance. Graduate students do a better job with their research programs if a self-paced guide is available to them. This book provides such a guide. It covers topics ranging from how to select an appropriate research problem to how to schedule and execute research tasks. The authors take a project management approach to planning and implementing graduate research in any discipline. They use a conversational tone to address the individual graduate student. This book helps graduate students and advisors answer most of the basic questions of conducting and presenting graduate research, thereby alleviating frustration on the part of both student and advisor. It presents specific guidelines and examples throughout the text along with more detailed examples in reader-friendly appendices at the end. By being more organized and prepared to handle basic research management functions, graduate students, along with their advisors, will have more time for actual intellectual mentoring and knowledge transfer, resulting in a more rewarding research experience.

Handbook of Emergency Response CRC Press

THOUSANDS OF MECHANICAL ENGINEERING FORMULAS IN YOUR POCKET AND AT YOUR FINGERTIPS! This portable find-it-now reference contains thousands of indispensable formulas mechanical engineers need for day-to-day practice. It's all here in one compact resource -- everything from HVAC to stress and vibration equations -- measuring fatigue, bearings, gear design, simple mechanics, and more. Compiled by a professional engineer with many years' experience, the Pocket Guide includes common conversions, symbols, and vital calculations data. You'll find just what you need to solve your problems quickly, easily, and accurately.

Earned Value to Business Value CRC Press

The negative impacts of carbon emissions from human activities continue to dramatically reshape the environmental, political, and social landscape. These impacts coupled with cap and trade schemes iterate the importance and need to properly measure and reduce greenhouse gas emissions. Carbon Footprint Analysis: Concepts, Methods, Implementation, an

Work Design CRC Press

Since the success of products significantly depends on the quality of product performance, inadequate management of the product design process can lead to improper performance of products that can result in significant long-term business losses. Design for Profitability: Guidelines to Cost Effectively Manage the Development Process of Complex Products presents a design guideline for complex product design and development that enables you to cost-effectively improve the technical performance of your products and consequently improve your competitiveness in the marketplace as well as improve profitability. The book helps you improve the competitiveness of your organization in the market and eventually improve profitability. It presents a mobile robots design guideline based on an empirical study of the mobile robots design process. This is an unprecedented guideline based on the empirical investigation of the internal aspects of the design process of complex products for cost-effectively enhancing the competitiveness in the market. The book also presents a hybrid lean-agile design paradigm for mobile robots. In addition, it points out key approaches and risks to manage the product development process efficiently. In designing complex products and integrated systems, industrial designers face a dilemma of cost-effectively striking a balance between product development time and product performance attributes. This book shows how and when value is added in product design and development through identifying statistically the most and least correlated design activities and strategies to product performance attributes. Introducing a new paradigm in the field of engineering design, the book gives you key approaches to efficiently manage the product development process.

A Human Factors and Systems Engineering Approach CRC Press

Winner of the IIE Book of the Month for June 2012 A project can be simple or complex. In each case, proven project management processes must be followed. In all cases of project management implementation, control must be exercised in order to assure that project objectives are achieved. Statistical Techniques for Project Control seamlessly integrates qualitative and quantitative tools and techniques for project control. It fills the void that exists in the application of statistical techniques to project control. The book begins by defining the fundamentals of project management then explores how to temper quantitative analysis with qualitative human judgment that makes project control nebulous but also offers opportunities to innovate and be creative in achieving control. The authors then discuss the three factors (time, budget, and performance) that form the basis of the operating characteristics of a project that also help determine the basis for project control. They then focus on computational network techniques for project schedule (time) control. Although designed as a practical guide for project management professionals, the book also appeals to students, researchers, and instructors.

Project Management for the Oil and Gas Industry CRC Press

Dealing with such a multi-layered and fungible intangible as quality during the design and construction process is difficult for all parties involved. To the architect, quality means an appealing and enduring design, but to the builder, it means understandable documents that, when acted upon, lead to an enduring, well-made structure. To the owner,

Total Productive Maintenance CRC Press

Unrivaled coverage of a broad spectrum of industrial engineering concepts and applications The Handbook of Industrial Engineering, Third Edition contains a vast array of timely and useful methodologies for achieving increased productivity, quality, and competitiveness and improving the quality of working life in manufacturing and service industries. This astoundingly comprehensive resource also provides a cohesive structure to the discipline of industrial engineering with four major classifications: technology; performance improvement management; management, planning, and design control; and decision-making methods. Completely updated and expanded to reflect nearly a decade of important developments in the field, this Third Edition features a wealth of new information on project management, supply-chain management and logistics, and systems related to service industries. Other important features of this essential reference include: * More than 1,000 helpful tables, graphs, figures, and formulas * Step-by-step descriptions of hundreds of problem-solving methodologies * Hundreds of clear, easy-to-follow application examples * Contributions from 176 accomplished international professionals with diverse training and affiliations * More than 4,000 citations for further reading The Handbook of Industrial Engineering, Third Edition is an immensely useful one-stop resource for industrial engineers and technical support personnel in corporations of any size; continuous process and discrete part manufacturing industries; and all types of service industries, from healthcare to hospitality, from retailing to finance. Of related interest . . . HANDBOOK OF HUMAN FACTORS AND ERGONOMICS, Second Edition Edited by Gavriel Salvendy (0-471-11690-4) 2,165 pages 60 chapters "A comprehensive guide that contains practical knowledge and technical background on virtually all aspects of physical, cognitive, and social ergonomics. As such, it can be a valuable source of information for any individual or organization committed to providing competitive, high-quality products and safe, productive work environments."-John F. Smith Jr., Chairman of the Board, Chief Executive Officer and President, General Motors Corporation (From the Foreword)

Strategies and Implementation Guide CRC Press

Despite preemptive preparations, disasters can and do occur. Whether natural disasters, catastrophic accidents, or terrorist attacks, the risk cannot be completely eliminated. A carefully prepared response is your best defense. Handbook of Emergency Response: A Human Factors and Systems Engineering Approach presents practical advice and guidelines on how to plan the coordinated execution of emergency response. A useful tool to mitigate logistical problems that often follow disasters or extreme events, the core of this guide is the role of human factors in emergency response project management. The handbook provides a systematic structure for communication, cooperation, and coordination. It highlights what must be done and when, and how to identify the resources required for each effort. The book tackles cutting-edge research in topics such as evacuation planning, chemical agent sensor placement, and riverflow prediction. It offers strategies for establishing an effective training program for first responders and insightful advice in managing waste associated with disasters. Managing a project in the wake of a tragedy is complicated and involves various emotional, sentimental, reactive, and chaotic responses. This is the time that a structured communication model is most needed. Having a guiding model for emergency response can help put things in proper focus. This book provides that model. It guides you through planning for and responding to various emergencies and in overcoming the challenges in these tasks.

A World System Approach CRC Press

In a market place flooded with consumer goods, the modern consumer has become incredibly savvy. They have developed to a point where they consider such things as what makes them look beautiful, what improves their character, and how a product enhances the value of life. If future product developers do not strategize the market-in concept, consumers will very likely turn their backs on those products. Written by Mitsuo Nagamachi, the founder of the technology, Innovations of Kansei Engineering elucidates Kansei Engineering, a unique product development technology based on the customer's feelings, wants, and needs. It defines the technology, its methods, and the developmental process related to designing a product. The book discusses how to: Break down the design into separate elements Interpret the Kansei of each element Design the overall product The text details how to construct the intelligent computer system to support new product development using the neural network model and fuzzy logic. It also addresses product quality control management and presents statistical methods of design. Using this innovative technique, you can turn your vision into a shape that can then be transformed into consumer goods that stand out.

Introduction to Industrial Engineering John Wiley & Sons

The mathematical models of productivity theory allows for the productivity rate of manufacturing machines and systems to be modelled with results that are validated by their actual output. This book presents the analytical approaches and methods to define maximal productivity rate of manufacturing machines and systems, based on the parameters of technological processes, structural design, reliability of mechanisms, and management systems.

Mechanical Engineering CRC Press

As organizations realize the benefits of PM, the need to develop effective management tools rises with the increasing complexity of new technologies and processes. Taking a systems approach to accomplishing goals and objectives, Project Management: Systems, Principles, and Applications covers contemporary tools and techniques of PM from an established pedagogical perspective. A project can be simple or complex. In each case, proven PM processes must be followed with a world systems view of the project environment. While on-the-job training is possible for many of the PM requirements, rigorous and formal training must be used. Consequently, PM resources are of high utility. This text fills the void that exists in the availability of PM resources. Although individual books dealing with management principles, optimization models, and computer tools are available, there are few guidelines for the integration of these three areas for PM purposes. This book integrates these areas into a comprehensive guide to PM. It introduces the triad approach to improve the effectiveness of PM with respect to schedule, cost, and performance constraints within the context of systems modeling. It provides details on an integrated systems PM approach that can help diminish the adverse impacts of these issues through good project planning, organizing, scheduling, and control. CRC Press Authors Speak Adedeji B. Baduri speaks about his book. Watch the video

Handbook of Industrial and Systems Engineering CRC Press

There is often a deep disconnect between the project team’s goals and those of the organization. Senior management wants "profitable" projects, but is only able to quantify its wishes in terms of the traditional project management elements: schedule and cost. To operate smoothly, the entire organization must be driven by the single goal of project profitability. Total Project Control presents valuable enhancements to the traditional project management approach, introducing new metrics and techniques for assessing the performance and profitability of projects. Demonstrating how to maximize the business value of a project, this book discusses new profitability-based data metrics, such as expected monetary value (EMV), expected project profit (EPP), Devaux's Index of Project Performance (DIPP), critical path drag, drag cost, and the cost of leveling with unresolved bottlenecks (CLUB). The impact of implementing these metrics can be far reaching. Not only will good management decisions, at both the project and executive levels, be supported by quantitative data, but bad decisions will become harder to justify. This book shows how to compute and use the new metrics to rightsize staffing levels for projects, programs, and organizations. It also explains what every project manager needs to know about earned value tracking: its uses, abuses, value, distortions, and potential fixes. The book then extends these metrics into techniques for indexing, tracking, progressing, and improving the business value of projects. See What’s New in the Second Edition: Includes new diagrams and new ways of computing critical path drag in complex networks Introduces DIPP Performance Index tracking Offers new exercises in how to compute critical path drag and drag cost and use them to maximize project value Focuses on topics senior management needs to be assured the project team is using to maximize project profitability

Total Project Control CRC Press

Presents an engineering guide containing a variety of mathematical and technical formulas and equations.

A Step-by-Step Process CRC Press

Work is all around us and permeates everything we do and everyday activities. Not all work is justified, not all work is properly designed, or evaluated accurately, or integrated. A systems model will make work more achievable through better management. Work is defined as a process of performing a defined task or activity, such as research, development, operations, maintenance, repair, assembly, production, and so on. Very little is written on how to design, evaluate, justify, and integrate work. Using a comprehensive systems approach, this book facilitates a better understanding of work for the purpose of making it more effective and rewarding.

Statistical Techniques for Project Control CRC Press

The first handbook to focus exclusively on industrial engineering calculations with a correlation to applications, Handbook of Industrial Engineering Equations, Formulas, and Calculations contains a general collection of the mathematical equations often used in the practice of industrial engineering. Many books cover individual areas of engineering