

Introduction Tpm Productive Maintenance Preventative

TPM for Every Operator covers the information that needs to be communicated to operators when facilitating a company-wide TPM initiative. It covers the main aspects of TPM, introducing frontline workers to this important manufacturing strategy that encourages them to participate in and even initiate routine maintenance that can help extend machine life and prevent stoppages. Based on actual implementations, this book addresses the challenges which TPM often raises for operators. Concise and accessible, it can be used as part of an extensive TPM training program, especially when paired with the TPM Guide for Workshop Leaders.

Reliability Engineering – A Life Cycle Approach is based on the author's knowledge of systems and their problems from multiple industries, from sophisticated, first class installations to less sophisticated plants often operating under severe budget constraints and yet having to deliver first class availability. Taking a practical approach and drawing from the author's global academic and work experience, the text covers the basics of reliability engineering, from design through to operation and maintenance. Examples and problems are used to embed the theory, and case studies are integrated to convey real engineering experience and to increase the student's analytical skills. Additional subjects such as failure analysis, the management of the reliability function, systems engineering skills, project management requirements and basic financial management requirements are covered. Linear programming and financial analysis are presented in the context of justifying maintenance budgets and retrofits. The book presents a stand-alone picture of the reliability engineer's work over all stages of the system life-cycle, and enables readers to: Understand the life-cycle approach to engineering reliability Explore failure analysis techniques and their importance in reliability engineering Learn the skills of linear programming, financial analysis, and budgeting for maintenance Analyze the application of key concepts through realistic Case Studies This text will equip engineering students, engineers and technical managers with the knowledge and skills they need, and the numerous examples and case studies include provide insight to their real-world application. An Instructor's Manual and Figure Slides are available for instructors.

This second edition of An Introduction to Predictive Maintenance helps plant, process, maintenance and reliability managers and engineers to develop and implement a comprehensive maintenance management program, providing proven strategies for regularly monitoring critical process equipment and systems, predicting machine failures, and scheduling maintenance accordingly. Since the publication of the first edition in 1990, there have been many changes in both technology and methodology, including financial implications, the role of a maintenance organization, predictive maintenance techniques, various analyses, and maintenance of the program itself. This revision includes a complete update of the applicable chapters from the first edition as well as six additional chapters outlining the most recent information available. Having already been implemented and maintained successfully in hundreds of manufacturing and process plants worldwide, the practices detailed in this second edition of An Introduction to Predictive Maintenance will save plants and corporations, as well as U.S. industry as a whole, billions of dollars by minimizing unexpected equipment failures and its resultant high maintenance cost while increasing productivity. A comprehensive introduction to a system of monitoring critical industrial equipment Optimize the availability of process machinery and greatly reduce the cost of maintenance Provides the means to improve product quality, productivity and profitability of manufacturing and production plants

TPM is an innovative Japanese concept. The origin of TPM can be traced back to 1951 when preventive maintenance was introduced in Japan. However the concept of preventive maintenance was taken from USA. Nippondenso was the first company to introduce plant wide preventive maintenance in 1960. Preventive maintenance is the concept wherein, operators produced goods using machines and the maintenance group was dedicated with work of maintaining those machines, however with the automation of Nippondenso, maintenance became a problem as more maintenance personnel were required. So the management decided that the routine maintenance of equipment would be carried out by the operators. (This is Autonomous maintenance, one of the features of TPM). Maintenance group took up only essential maintenance works.

Handbook of Maintenance Management and Engineering

Principles, Methods, and Applications

Enterprise, Business-Process and Information Systems Modeling

Guide to Planned Maintenance

An introduction

Maintenance and Spare Parts Management

This well-received text, designed for the students of MBA, BTech (Mechanical Engineering and Industrial and Production Engineering) and MTech (Industrial Engineering and Management), has been revised and reorganized in its second edition. The book, divided into six sections, deals with the concepts of core maintenance and related auxiliary functions, core spares issues, related auxiliary spares functions, caselets and policy cases. This research-based study attempts to impart a comprehensive knowledge of maintenance and spare parts management, particularly in the Indian context. Illustrations, tables, caselets, cases and presentation of several topics in A-Z points add pedagogic value to the text.

Process industries have a particularly urgent need for collaborative equipment management systems, but until now have lacked for programs directed toward their specific needs. TPM in Process Industries brings together top consultants from the Japan Institute of Plant Maintenance to modify the original TPM Development Program. In this volume, they demonstrate how to analyze process environments and equipment issues including process loss structure and calculation, autonomous maintenance, equipment and process improvement, and quality maintenance. For all organizations managing large equipment, facing low operator/machine ratios, or implementing extensive improvement, this text is an invaluable resource.

The two-volume set LNAI 11431 and 11432 constitutes the refereed proceedings of the 11th Asian Conference on Intelligent Information and Database Systems, ACIIDS 2019, held in Yogyakarta, Indonesia, in April 2019. The total of 124 full papers accepted for publication in these proceedings were carefully reviewed and selected from 309 submissions. The papers of the first volume are organized in the following topical sections: knowledge engineering and semantic web; text processing and information retrieval; machine learning and data mining; decision support and control systems; computer vision techniques; and databases and intelligent information systems. The papers of the second volume are divided into these topical sections: collective intelligence for service innovation, technology management, E-learning, and fuzzy intelligent systems; data structures modelling for knowledge representation; advanced data mining techniques and applications; intelligent information systems; intelligent methods and artificial intelligence for biomedical decision support systems; intelligent and contextual systems; intelligent

systems and algorithms in information sciences; intelligent supply chains and e-commerce; sensor networks and Internet of Things; analysis of image, video, movements and brain intelligence in life sciences; and computer vision and intelligent systems.

Lean thinking is a powerful method that allows organizations to improve the productivity, efficiency and quality of their products or services.

Achieving these benefits requires good teamwork, clear communication, intelligent use of resources and a commitment to continuous improvement. This 2006 book shows how lean thinking can be applied in practice, highlighting the key challenges and pitfalls. The authors, based at a leading centre for lean enterprise research, begin with an overview of the theory of lean thinking. They then explain the core tools and techniques and show how they can be applied successfully. The detailed implementation of lean thinking is illustrated by several case studies, from a range of industries, in which the authors had unprecedented access to the management teams. With its focus on implementation and practical solutions, this book will appeal to managers at all levels, as well as to business students and researchers in lean thinking.

Simplified Lean Manufacture

Managing productive maintenance

Productivity and Reliability-Based Maintenance Management, Second Edition

Moving Towards Productivity and Quality Excellence

Total Productivity Maintenance

20th International Conference, BPMDS 2019, 24th International Conference, EMMSAD 2019, Held at CAiSE 2019, Rome, Italy, June 3–4, 2019, Proceedings

A systematic approach to improving production and quality systems, total productive maintenance (TPM) involves all employees through a moderate investment in maintenance. Therefore, a successful TPM implementation requires support of all employees from C-level on down. Total Productive Maintenance: Strategies and Implementation Guide highlights the

Inhaltsangabe:Abstract: Modern manufacturing requires that organisations that want to be successful and to achieve world-class manufacturing must possess both effective and efficient maintenance. One approach to improve the performance of maintenance activities is to implement a Total Productive Maintenance (TPM) system. The aim of this dissertation is to prove that the introduction of a TPM system is by no means an easy task, because there are several barriers that encumber the implementation process, the driving forces to success have to be identified and well understood, and a process of organisational change has to be managed successfully. The study analyses impediments, barriers and obstacles to the implementation procedure and discovers key success factors concluding with a conceptual framework for a successful TPM implementation. The dissertation also examines the challenge of managing change within the TPM context and identifies that such a TPM journey requires employee and management commitment to be successful. Through a case study of implementing TPM in an automotive supplier company, the practical aspect within and beyond basic TPM theory and problems encountered during the implementation are discussed and analysed. The paper concludes that the implementation of TPM is definitely not an easy task, which is considerably burdened by organisational, behavioural and other barriers, and necessitates the difficult mission to change peoples mindsets from a traditional maintenance approach.

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To be able to compete successfully both at national and international levels, production systems and equipment must perform at levels not even thinkable a decade ago.

Requirements for increased product quality, reduced throughput time and enhanced operating effectiveness within a rapidly changing customer demand environment continue to demand a high maintenance performance. In some cases, maintenance is required to increase operational effectiveness and revenues and customer satisfaction while reducing capital, operating and support costs. This may be the largest challenge facing production enterprises these days. For this, maintenance strategy is required to be aligned with the production logistics and also to keep updated with the current best practices. Maintenance has become a multidisciplinary activity and one may come across situations in which maintenance is the responsibility of people whose training is not engineering. This handbook aims to assist at different levels of understanding whether the manager is an engineer, a production manager, an experienced maintenance practitioner or a beginner. Topics selected to be included in this handbook cover a wide range of issues in the area of maintenance management and engineering to cater for all those interested in maintenance whether practitioners or researchers. This handbook is divided into 6 parts and contains 26 chapters covering a wide

range of topics related to maintenance management and engineering.

TPM (Total Productive Maintenance) is an innovative approach to maintenance. This book introduces TPM to managers and outlines a three-year program for systematic TPM development and implementation.

Strategies and Implementation Guide

A Life Cycle Approach

Intelligent Information and Database Systems

Principles And Practice Of Total Productive Maintenance

Just-in-Time Manufacturing

Implementing Total Productive Maintenance

The management of construction projects is a wide ranging and challenging discipline in an increasingly international industry with continual challenges and demands for improvements in safety, in quality and cost control, and in the avoidance of contractual disputes. Construction Management grew out of a Leonardo da Vinci project to develop a series of Common Learning Outcomes for Engineers in Construction. Financed by the European Union, the project aimed to develop a library of basic materials for developing construction management skills for use in a pan-European context. Focused exclusively on the management of the construction phase of a project from the contractor's point of view, Construction Management covers the complete range of topics of which mastery is required of a construction management professional for the effective delivery of new construction projects. With the continued internationalization of the construction industry, Construction Management will be required reading for undergraduate and postgraduate students across the world. Tap into Joel Levitt's vast array of experience and learn how to improve almost any aspect of your maintenance organization (and your own abilities)! This new edition of a classic first educates readers about the globalization of production and the changing of maintenance leadership, and then gives them real usable ideas to aid in these areas. Completely reorganized so that material is presented within the context of major sections, the second edition tells the story of maintenance management in factory settings. It points out potential problems and new opportunities, what bosses really want, specifics for improvement of maintenance and production. Maintenance Management revisited and revised, quality improvement, complete coverage of current maintenance practices, procedures, aids, interfaces and strategies, as well as personal and personnel development strategies. Contains a specialized glossary so you can easily understand the specialized language of factory maintenance. Provides specific "how-to" tips and concrete techniques for achieving continuous improvement. Updates the 20 steps to world class maintenance to include the 6 areas of focus for world class maintenance: a completely updated maintenance evaluation questionnaire that reflects new techniques and technologies. Breaks down and explains a team approach to maintenance work. Offers new sections on: managing shutdowns, craft training, and communications. Contains 2 revisions to the RCM discussion and includes a new discussion about PMO.

This book is an introduction on the reliability and efficacy of the always in which plant and machinery are handled. Assessment of a great way or maybe over time have become the only way to maintain proper upkeep. The pillars of maintenance that involve order tend to discipline (to name just a few) come from Japanese concepts merged with the equipment enhancing techniques of TPM. Developed as early as 1951 TPM is now a cornerstone for better and more efficient productivity. Standardization, history, care, and functioning quality and safety are just a few of the pillars/ tenets of maintenance today. Criticality of machines and severity of abnormalities spark the growth of the zero abnormality state. Error free autonomous functioning is the pillar for life saving maintenance. Equipment today must contain designs for measuring data that display performance and errors. Ultimately the objective is to prevent deterioration, minimize down time and stoppages and achieve maximum effectiveness. This script will akin the reader to these concepts in a friendly way. Enjoy!!!

This book constitutes the proceedings of two events held at the CAiSE conference and relating to the areas of enterprise, business information systems modeling: The 20th International Conference on Business Process Modeling, Development and Support, BPMDS, and the 24th International Conference on Evaluation and Modeling Methods for Systems Analysis and Development, EMMSAD. Both conferences took place in Rome, Italy, in June 2019. The 7 full and 2 short papers accepted for BPMDS were carefully reviewed from a total of 20 submissions; for EMMSAD 15 full papers were accepted from 38 submissions. The papers were organized and named as follows: BPMDS: large and complex business process modeling and development; execution and understandability of process models; novel approaches in enterprise modeling; transformative business process modeling, development, and support; foundations of modeling and method engineering; enterprise process and capability modeling; information systems and requirements modeling; domain-specific and ontology modeling; and evaluation of modeling approaches.

Reliability Engineering

Lean Evolution

Equipment Management

Total Quality Management

Managing Factory Maintenance

QUALITY MANAGEMENT

A valuable tool for establishing and maintaining system reliability, overall equipment effectiveness (OEE) has proven to be very effective in reducing unscheduled downtime for companies around the world. So much so that OEE is quickly becoming a requirement for improving quality and substantiating capacity in leading organizations, as well as a requirement for The Practical, How-to Guide to Succeeding with Kaizen Programs and Events. Today manufacturers need kaizen's continuous productivity improvement and waste reduction techniques more than ever. Kaizen and Kaizen Event Implementation provides specific, detailed solutions that have proven successful in real manufacturing environments. Ortiz, author of the best-selling Lessons from a Lean Consultant, covers every element of a successful kaizen program and offers techniques for implementing several key kaizen events. Drawing on his unsurpassed, in-the-trenches experience, he shares powerful insights into changing cultures, gaining management buy-in, training, reporting, follow-

up, and much more. Whether you're a plant manager, director, engineer, or quality specialist, this book will help you make kaizen work. Avoid common implementation mistakes Find the right champion and establish an effective steering committee Create timelines, select teams and leaders, and define objectives Use kaizen events to implement 5S, standard work, Kanban, and new line designs Includes a chapter-length case study from a real manufacturing firm

Recent advancements in information systems and computer technology have led to developments in equipment and robotic technology that have permanently changed the characteristics of manufacturing equipment. Equipment Management in the Post-Maintenance Era: A New Alternative to Total Productive Maintenance (TPM) introduces a new way of thinking to help high-tech organizations manage an increasingly complex equipment base. It also facilitates the fundamental understanding of equipment management those in traditional industries will need to prepare for the emerging microchip era in equipment. Kern Peng shares insights gained through decades of managing equipment performance. Using a systems model to analyze equipment management, he introduces alternatives in equipment management that are currently gaining momentum in high-tech industries. The book highlights the fundamental internal flaw in maintenance organizational setup, presents new approaches to replace maintenance functional setup, and illustrates a time-tested transformation and implementation process to help transition your organization from the maintenance era to the new post-maintenance era. Breaks down the history of equipment into five phases Provides a clear understanding of equipment management fundamentals Introduces alternatives in equipment management beyond the mainstream principles of maintenance management The book examines maintenance management logistics, including planning and budgeting, training and people development, customer services and management, vendor management, and inventory management. Supplying a comprehensive look at the history of equipment management, it analyzes current maintenance practice and details approaches that can significantly improve the effectiveness and efficiency of your equipment management well into the future.

Written in clear, straightforward language, Just-in-Time Manufacturing: An introduction discusses in-depth the implementation of JIT manufacturing. The objectives are twofold: firstly, to acquaint the reader with the overall JIT concept and the factors necessary for its implementation, and secondly to reinforce this with an actual case study of JIT implementation in a manufacturing company.

Planning and Control of Maintenance Systems

A Case Study

An Introduction to Predictive Maintenance

Factors Affecting the Implementation of a Total Productive Maintenance System (TPM)

Lean Manufacturing

Certified Professional Maintenance Manager Review Pack

This book provides the knowledge foundations and strategic directions to organizations aiming to move towards quality, productivity and business excellence. Through latest case studies and practical examples, readers will be guided from identifying and prioritizing the opportunities for improvement, measuring and analyzing the root causes, to eliminating the sources of the problems. Readers will also be exposed to the information technology used in the "Trilogy of Moving Towards Business Excellence". For example, moving towards quality excellence can be achieved through digitalization of ISO9001:2015 quality management system. In addition to dispensing with most of the paper work as well as the internal audit, it will also ensure that the key requirements of the latest version of ISO9001:2015 are complied with and executed effectively. Both the quality and productivity of the organization will be enhanced. Total Factor Productivity is heavily used to help organizations move towards productivity excellence. System integration is one of the key techniques used to achieve this goal. For example, when a high-technology operations system, such as BD, ECOM, FINTECH, AI, IOT etc., is integrated into HIMS-BEST, the organization will attain the 1+1=3 synergic benefit. It will achieve the organizational goals in addition to achieving the operational goals.

This Book Explores The Topics Included In The Syllabus Of Anna University Extensively. A Reference Table On The Factors For Quality Control Charts, Numerical Examples For Each Control Chart, The Questions For Short Answers, And A Few Web Site Addresses Have Been Included To Obtain And Sustain The Interest Of The Student Community And The Teaching Fraternity. In This Second Edition, A Chapter Was Added With Details On Topics Such As Quality Circle, Zero Defects, Just In Time, Kanban And Poka Yoke To Cater For The Expectations Of The Students As Well As Teachers. The Details On 5S, Yy Analysis, Five W S And Two H S Analysis And Brainstorming Methodology Have Been Enlarged With Examples. Twenty-Three Case Studies Have Been Added In This Edition To Extend The Scope And Knowledge Of The Student Community. In Addition To This, Twelve Numerical Problems On Different Aspects Of Spc And Six Sigma As Illustrative Examples And The Enriched Question Bank Have Been Added For Clarity In Teaching And Learning. This Book Can Be Used As A Textbook By All The Final Year B.E./B.Tech. Students Of Anna University.

Analyzing maintenance as an integrated system with objectives, strategies and processes that need to be planned, designed, engineered, and controlled using statistical and optimization techniques, the theme of this book is the strategic

holistic system approach for maintenance. This approach enables maintenance decision makers to view maintenance as a provider of a competitive edge not a necessary evil. Encompassing maintenance systems; maintenance strategic and capacity planning, planned and preventive maintenance, work measurements and standards, material (spares) control, maintenance operations and control, planning and scheduling, maintenance quality, training, and others, this book gives readers an understanding of the relevant methodology and how to apply it to real-world problems in industry. Each chapter includes a number exercises and is suitable as a textbook or a reference for a professionals and practitioners whilst being of interest to industrial engineering, mechanical engineering, electrical engineering, and industrial management students. It can also be used as a textbook for short courses on maintenance in industry. This text is the second edition of the book, which has four new chapters added and three chapters are revised substantially to reflect development in maintenance since the publication of the first edition. The new chapters cover reliability centered maintenance, total productive maintenance, e-maintenance and maintenance performance, productivity and continuous improvement.

Productivity and Reliability-Based Maintenance Management, Second Edition is intended to provide a strong yet practical foundation for understanding the concepts and practices of total productive maintenance (TPM) management—a proactive asset and resource management strategy that is based on enhancing equipment reliability and overall enterprise productivity. The book is intended to serve as a fundamental yet comprehensive educational and practical guide for departing from the wait-failure-emergency repair cycle that has plagued too many industries, instead advancing a proactive and productive maintenance strategy. It is not intended to be a how-to-fix-it manual, but rather emphasizes the concept of a world-class maintenance management philosophy to avoid the failure in the first place. Universities, junior and community colleges, and technical institutes as well as professional, corporate, and industrial training programs can benefit by incorporating these fundamental concepts in their technical and managerial curricula. The book can serve as a powerful educational tool for students as well as for maintenance professionals and managers. In addition to updating the previous historical and statistical data and tables, the second edition expands on and adds to case studies based on current maintenance-related events. Several numerical examples and explanations are revised in order to enhance the clarity of the methodology. The second edition introduces the readers to the state-of-the-art concepts of the Internet of Things (IoT), smart sensors, and their application to maintenance and TPM.

TPM for Every Operator

Impact Analysis of Total Productive Maintenance

Construction Management

Understanding Overall Equipment Effectiveness, Reliability, and Maintainability

Production and Operations Management

Total Productive Maintenance

This book covers the emerging and important topics related to production and operations management in a systematic way. It covers not only the essentials of planning, designing, managing and controlling of manufacturing operations, but also a number of relevant topics such as total preventive maintenance, environmental issues in production system, advanced production system, total productivity management and work system design, which are not covered in many books. The book is a useful resource for undergraduate and postgraduate students of MBA programmes, as well as B.Tech and M.Tech programmes of production and industrial engineering. Key Features • Theories and concepts based on day-to-day practical applications in the industry • Large number of solved examples to explain the theoretical concepts • Case study at the end of each chapter to illustrate the theory • Brings out the link between linear programming and its applications

This book present the state of the art in Total Productive Maintenance (TPM) and its benefits. The authors present a survey applied to 368 manufacturing industries in order to determine their level of execution of TPM. Then a series of causal models are presented. For each model, the authors present a measure of the dependency between the critical success factors and the benefits obtained, allowing industry managers to differentiate between essential and non-essential activities. The content also allows students and academics to obtain a theoretical and empirical basis on the importance of TPM as a lean manufacturing tool in the context of industry 4.0.

The never-ending global search for a country with a low labour wage is almost bottoming out. The so-called labor-oriented apparel manufacturing industry is poised to change. Due to fierce global pressure on reducing price and lead time, the textiles and apparel producers will have to banish all waste from their supply chain. Lean manufacturing which removes waste and smoothens the process flow is gaining popularity among textiles and apparel producers and will be a key element for the survival of the industry in the years ahead. An overview of various lean tools with a balanced mix of conceptual knowledge and practical applications in the context of apparel manufacturing Valuable industry information which managers and engineers can follow themselves without the need to hire outside consultants Case studies and examples from apparel manufacturing demonstrating how lean tools are being used successfully by leading organizations; an academician's delight Possible use cases of several lean tools having potential use in the apparel manufacturing scenario

Organisations are now focused on total customer satisfaction. However there is a lack of understanding the requirements and the customer needs. Total Quality Management (TQM) integrates all phases and ensures a defect free quality product. This textbook provides the understanding of all aspects of TQM and the implementation. This textbook covers all aspects of TQM, discusses quality systems in detail, highlights the importance of the needs of the customer, and presents the concept of Total Productive Maintenance (TPM). Written as a textbook for students of engineering and management, but also explains all quality systems which will be helpful to all organisations in choosing the correct quality system and helpful to managers in decision making while analyzing any process. A solutions manual and power point presentations slides are available for qualified adoptions.

11th Asian Conference, ACIIDS 2019, Yogyakarta, Indonesia, April 8-11, 2019, Proceedings, Part II

Modelling and Analysis

Total Quality Management (TQM)

The OEE Primer

Introduction to TPM

Proven Strategies and Techniques to Keep Equipment Running at Maximum Efficiency

With the advent of disruptive digital technologies, companies are facing unprecedented challenges and opportunities. Advanced manufacturing systems are of paramount importance in making key enabling technologies and new products more competitive, affordable, and accessible, as well as for fostering their economic and social impact. The manufacturing industry also serves as an innovator for sustainability since automation coupled with advanced manufacturing technologies have helped manufacturing practices transition into the circular economy. To that end, this Special Issue of the journal Applied Sciences, devoted to the broad field of Smart Sustainable Manufacturing Systems, explores recent research into the concepts, methods, tools, and applications for smart sustainable manufacturing, in order to advance and promote the development of modern and intelligent manufacturing systems. In light of the above, this Special Issue is a collection of the latest research on relevant topics and addresses the current challenging issues associated with the introduction of smart sustainable manufacturing systems. Various topics have been addressed in this Special Issue, which focuses on the design of sustainable production systems and factories; industrial big data analytics and cyberphysical systems; intelligent maintenance approaches and technologies for increased operating life of production systems; zero-defect manufacturing strategies, tools and methods towards online production management; and connected smart factories.

For too long, maintenance has been regarded as a necessary evil rather than a vital contributor to effective mining operations. Today's enlightened mining managers are realizing that a new approach is urgently needed. An integrated, well-understood, companywide strategy is essential to succeed in today's fiercely competitive, high-stakes marketplace. Equipment Management: Key to Equipment Reliability and Productivity in Mining, Second Edition, explains how to make that strategy come alive. Essential reading for mining professionals, this book shows how to create an environment and a culture that allow maintenance to succeed. Author Paul D. Tomlison draws on more than 35 years of direct, worldwide maintenance management consulting experience in the design, implementation, and evaluation of maintenance programs for heavy industry. He explains how the equipment management strategy successfully focuses the efforts of all mining departments on the essential task of delivering consistently reliable production equipment to better guarantee a profitable operation. Tomlison offers valuable insights for developing effective preventive measures, scheduling more planned work, and improving productivity, resulting in higher quality work and less cost while reducing unnecessary downtime and avoiding the consequences of failure.

Production costs are being reduced by automation, robotics, computer-integrated manufacturing, cost reduction studies and more. These new technologies are expensive to buy, repair, and maintain. Hence, the demand on maintenance is growing and its costs are escalating. This new environment is compelling industrial maintenance organizations to make the transition from fixing broken machines to higher-level business units for securing production capacity. On the academic front, research in the area of maintenance management and engineering is receiving tremendous interest from researchers. Many papers have appeared in the literature dealing with the modeling and solution of maintenance problems using operations research (OR) and management science (MS) techniques. This area represents an opportunity for making significant contributions by the OR and MS communities. Maintenance, Modeling, and Optimization provides in one volume the latest developments in the area of maintenance modeling. Prominent scholars have contributed chapters covering a wide range of topics. We hope that this initial contribution will serve as a useful informative introduction to this field that may permit additional developments and useful directions for more research in this fast-growing area. The book is divided into six parts and contains seventeen chapters. Each chapter has been subject to review by at least two experts in the area of maintenance modeling and optimization. The first chapter provides an introduction to major maintenance modeling areas illustrated with some basic models. Part II contains five chapters dealing with maintenance planning and scheduling. Part III deals with preventive maintenance in six chapters. Part IV focuses on condition-based maintenance

and contains two chapters. Part V deals with integrated production and maintenance models and contains two chapters. Part VI addresses issues related to maintenance and new technologies, and also deals with Just-in-Time (JIT) and Maintenance.

Reduce or eliminate costly downtime Short on teory and long on practice, this book provides examples and case studies, designed to provide maintenance engineers and supervisors with a framework for operational strategies and day-to-day management and training techniques that will keep their equipment running at top efficiency.

Impact on Company

Smart Sustainable Manufacturing Systems

Maintenance, Modeling and Optimization

Key to Equipment Reliability and Productivity in Mining

Introduction

Kaizen and Kaizen Event Implementation

This comprehensive text on Quality Management provides ways and means of delivering efficient and effective production/services quality to utmost satisfaction of the customers. Comprising 20 chapters, the book explains the concepts and techniques of quality management supported with related case studies. Numerical examples given in each chapter help students to understand the concept easily. Primarily designed for MBA, ME/MTech (Industrial Engineering, Production Engineering), BE/BTech (Mechanical Engineering and Production Engineering) and MSc (Operations Research and Statistical Quality Control), the book also serves as a reference for professionals/consultants to carryout projects in quality domain for manufacturing or service organisations. **KEY FEATURES OF THE BOOK** • Detailed coverage of process and statistical quality control • Chapters on ANOVA, orthogonal arrays and signal-to-noise ratio • A chapter on Six Sigma including Shainin techniques • A chapter on Analytical Hierarchy Process (AHP) • Presentation of Design of Experiments (DOE) techniques Audience • MBA • ME/MTech (Industrial Engineering, Production Engineering) • BE/BTech (Mechanical Engineering and Production Engineering) • MSc (Operations Research and Statistical Quality Control)

Managing Productive Maintenance is a detailed guide to improve results through the implementation of best practices that eliminates equipment failures and maximizes the productivity of industrial assets. In this book, professionals of maintenance and production areas will find practical guidance and a simple approach to implement proven methods and techniques that unleash the full value in maintenance management activities in their organizations while bringing about unprecedented levels of operational reliability.

Lean Tools in Apparel Manufacturing

best practices to eliminate equipment failures and maximize productivity

A New Alternative to Total Productive Maintenance (TPM)

TPM in Process Industries

TPM Development Program

Critical Success Factors and Benefits