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898 - JAMARI KOLE

Standard work is an agreed upon set of work procedures that effectively combines people, materials, and machines to maintain quality, efficiency, safety, and predictability. Work is described precisely in terms of cycle time, work in process, sequence, time, layout, and the inventory needed to conduct the activity. Standard work begins as an improvement baseline and evolves into a reliable method. It establishes the best activities and sequence steps to maximize performance and minimize waste. In this book you will learn about: The characteristics of standards Key benefits and applications of standardization Standard work concepts and calculations Standard work steps and documentation Using standard work manuals, charts, and worksheets Cell staffing (line balancing and full work) Productivity's Shopfloor Seriesbooks offer a simple, cost-effective approach for building basic knowledge about key manufacturing improvement topics. Like all our Shopfloor Seriesbooks, Standard Work for the Shopfloorin-

cludes innovative instructional features that are the signature of the Shopfloor Series. The goal: to place powerful and proven improvement tools such as pull production techniques in the hands of your entire workforce. Productivity's Shopfloor Seriesbooks offer a simple, cost-effective approach for building basic knowledge about key manufacturing improvement topics. Like all our Shopfloor Seriesbooks, Standard Work for the Shopfloorincludes innovative instructional features that are the signature of the Shopfloor Series. The goal: to place powerful and proven improvement tools such as pull production techniques in the hands of your entire workforce.

The philosophy of kaizen, which simply means continuous improvement, needs to be adopted by any organization seeking to implement lean improvements that go beyond cost cutting. Kaizen events are opportunities to make focused changes in the workplace. Kaizen for the Shopfloor takes readers through the critical steps for conducting a very effective kaizen event: one that is well planned, well implemented, and well documented.

As the newest addition to the Shingo Prize Winning Shopfloor Series, Kaizen for the Shopfloor distills the complexities of jump starting lean processes into an easily accessible format for those front-line employees who make lean possible. About the Shopfloor Series: Put proven improvement tools in the hands of your entire workforce! Progressive shopfloor improvement techniques are imperative for manufacturers who want to stay competitive and to achieve world class excellence. And it's the comprehensive education of all shopfloor workers that ensures full participation and success when implementing new programs. The Shopfloor Series books make practical information accessible to everyone by presenting major concepts and tools in simple, clear language and at a reading level that has been adjusted for operators by skilled instructional designers. One main idea is presented every two to four pages so that the book can be picked up and put down easily. Each chapter begins with an overview and ends with a summary section. Helpful illustrations are used throughout.

Overall Equipment Effectiveness (OEE) is a crucial measure in TPM that reports on how well equipment is running. It factors three elements ---the time the machine is actually running, the quantity of products the machine is turning out, and the quantity of good output - into a single combined score. Directly addressing those who are best positioned to track and improve the effectiveness of equipment, OEE for Operators defines basic concepts and then provides a systematic explanation of how OEE should be applied to maximize a piece of equipment's productivity and recognize when its efficiency is being compromised. Features This book gives a comprehensive account on the manufacturing techniques

to synchronize the desired properties of both traditional and advanced ceramics. Offers exclusive and up to date information on industrial ceramic processing equipment and approaches and discusses actual industrial practices taking a product-oriented approach It should serve as a text to answer the processing of ceramics and achieve targeted product in industrial environment.

POLCA (Paired-cell Overlapping Loops of Cards with Authorization) is a card-based visual control system that manages the flow of jobs through the shop floor: at each operation, it controls which job should be worked on next to meet delivery targets. POLCA ensures that upstream operations use their capacity effectively by working on jobs that are needed downstream, while at the same time preventing excessive work-in-process (WIP) build-ups when bottlenecks appear unexpectedly. POLCA is particularly suited to companies manufacturing high-mix, low-volume and customized products. Such companies struggle with long lead times, late deliveries, and daily expediting to meet delivery dates. ERP systems are not designed to deal with this highly variable environment, and add-on software such as Finite Capacity Scheduling systems can require complex installation. Also, the Kanban system does not work well with low-volume or custom production. POLCA has delivered impressive results in such environments. It does not require any complex software implementation: it can be used without an ERP system or it can seamlessly complement an existing ERP system. This book: Provides a step-by-step roadmap on how to implement POLCA; invaluable for both companies that wish to implement POLCA as well as consultants and academics advising such companies. Ex-

plains the concepts in practical and easy-to-understand terms by showing detailed shop-floor examples. Includes more than 100 illustrations for understanding how POLCA works as well as for elaborating on details of the implementation steps. Contains case studies written by company owners and executives documenting their POLCA implementation process and the results achieved in various industries in six countries.

Kanban is the name given to the inventory control card used in a pull system. The primary benefit of kanban is to reduce overproduction, the worst of the seven deadly wastes. A true kanban system produces exactly what is ordered, when it is ordered, and in the quantities ordered. It is essentially a dynamic work order that moves with the material. Each kanban identifies the part or subassembly unit and indicates where each one came from and where each is going. Used this way, kanban acts as a system of information that integrates your plant, connects all processes one to another, and connects the entire value stream to customer demand. Kanban for the Shopfloor provides a working manual for those seeking to implement this method of production control in any operation. It defines the various terms and methods employed in kanbans, and illustrates how when adhered to, kanban is an element of continuous improvement that ultimately leads to the ideal of one-piece flow." In addition to reducing the waste of overproduction, kanban will help your company increase flexibility to respond to customer demand, coordinate production of small lots and wide product variety, and simplify the procurement process. About the Shopfloor Series: Put proven improvement tools in the hands of your entire workforce! Progressive shopfloor improvement techniques are

imperative for manufacturers who want to stay competitive and to achieve world class excellence. And it's the comprehensive education of all shopfloor workers that ensures full participation and success when implementing new programs. The Shopfloor Series books make practical information accessible to everyone by presenting major concepts and tools in simple, clear language and at a reading level that has been adjusted for operators by skilled instructional designers. One main idea is presented every two to four pages so that the book can be picked up and put down easily. Each chapter begins with an overview and ends with a summary section. Helpful illustrations are used throughout. Other topics in the Shopfloor Series: Kanban, 5S, Quick Changeover, Mistake-Proofing, Just-in-Time, TPM, Cellular Manufacturing All About Pull Production is a practical guide for anyone looking to implement pull systems. It focuses on practical application and values functionality over theory, albeit it explains the underlying relations. It is not a high-level philosophical discussion of lean, but a book to help you roll up your sleeves and get the job done. It is written for the practitioner. If you are working in production or logistics and want to implement pull, then this book is for you. It also serves as a useful reference for students and researchers of lean manufacturing. With a foreword by John Shook. Praise for All About Pull Production "This book provides you the means to create supply systems for the rapidly evolving complexities of the twenty-first century, anywhere, in any industry."-John Shook, Chairman, Lean Global Network "Prof. Roser is the go-to source for anything about lean. With this comprehensive book on pull production he has written an authoritative work. Highly recommended for anyone interested in

getting to the heart of Toyota's pull principle."-Dr. Torbjørn Netland, Professor of Production and Operations Management, ETH Zürich "This book explains pull production very well and in an excellent style. The book definitely demystifies pull. Without doubt, the book will be the go-to guide for both beginners and experienced practitioners."-Cheong Tsang, Bosch Plant Manager (Retired) "Readers will definitely obtain a lot of valuable insights and new ideas from this book on pull production."-Dr. Masaru Nakano, Professor, Keio University; Former Toyota Manager "This is by far the best in-depth exploration of pull. It is amazingly comprehensive, including warnings, common errors, and applicability of various pull systems. I am sure that it will become THE standard reference book on pull systems."-Dr. John Bicheno, Emeritus Professor of Lean Enterprise, University of Buckingham "This book presents pull production control in a comprehensive and practice-oriented way for students and practitioners alike."-Dr.-Ing. Jochen Deuse, Professor, Head of Institute of Production Systems, TU Dortmund University; Director Centre for Advanced Manufacturing, University of Technology Sydney "The book provides well structured, in-depth insights in the application of pull systems, from Kanban to less-known but powerful alternatives. The book is a valuable source for students and practitioners in industry, from lean experts to production managers."-Dr.-Ing. Ralph Richter, Former Head of the Bosch Production System and Plant Manager at Bosch "With this deeply researched and considered book, Prof. Roser goes beyond the simple explanations of pull to reveal pull production in its compelling simplicity. The results provide a convincing case and trusty guide."-Peter Willats, Professor, University of Buckingham, Co-

Founder, Kaizen Institute of Europe "Anyone considering a pull system should read this book."-Mark Warren, Manufacturing Engineer and Production Historian "What you have put together in this book is amazing-this may become your magnum opus in due course! It's going to be a great reference resource for practitioners and academics."-Dr. Rajan Suri, Emeritus Professor of Industrial Engineering, University of Wisconsin-Madison, Inventor of POLCA "This book is excellent material for understanding and using pull production. It is very informative and written in a very polite and pleasant personal style with good reflections and clarifications."-Dr. Björn Johansson, Professor of Sustainable Production, Chalmers University of Technology, Sweden
Despite the numerous competitive advantages of one-of-a-kind production (OKP), the low efficiency and high costs associated with OKP companies threaten to push their business opportunities into the hands of cheaper overseas suppliers. One-of-a-Kind Production introduces a novel strategy and technology to help OKP companies to efficiently mass-produce customized products. In One-of-a-Kind Production, case studies from OKP companies are used to validate the feasibility and effectiveness of the OKP strategy and technology. These case studies include: a structural steel construction company, a manufacturer of specifically ordered compressors and refrigeration systems, a customized high pressure vessel manufacturing company, and a custom window and door manufacturer. To help readers understand OKP strategy and technology, the authors offer a year's free access to the OKP Management and Control Software System. This system is based on a new integrated production control and management concept, namely product production struc-

ture. It is a useful tool – and One-of-a-Kind Production is a valuable guide – for production engineers and managerial staff in manufacturing companies, as well as for university researchers and graduate students.

Identifies the most prominent forms of waste in factories, suggests how to combine and simplify operations, and provides practical examples

Topics include: The difference between kanban and conventional ordering systems. Types of kanbans. Six rules for optimizing a kanban system. How to use line balancing and load leveling in regards to takt time and kanban. When and how to circulate kanban cards. How to reduce the number of kanbans. Using kanban as a visual system. The kanban learning package includes the following: Leader's Guide 5 copies of Kanban for the Shopfloor 1 laminated job aid: A Kanban Implementation Summary 1 copy of the classic book Kanban: Just-In-Time At Toyota, and additional presentation materials on CD Purchase Separately: Kanban for the Shopfloor book - ISBN 1-56327-269-5 \$25.00 Kanban: Just-in-Time at Toyota by Japan Mgmt. Assoc. (ed), Translated by David J. Lu - ISBN 0-915299-48-8 \$45.00

The Lean Expert: Educating and Elevating Lean Practitioners Throughout Your Organization outlines a method that can help organizations engage associates and empower them to achieve "expert status" in the nine core principles of Lean. By implementing the Lean Discipline Expert process detailed in the book, companies will demonstrate to their associates that they believe they are the organization's greatest assets, while empowering them to make lasting improvements to the organization. The book provides a robust and proven process for

creating a Lean culture. It outlines a method, with defined steps, for the development of Lean Discipline Resource People that will help associates achieve "expert status" in the core Lean principles of 5S-Visual Management, Value Stream Mapping, Standard Work, Total Productive Maintenance, Quick Changeover, Error Proofing, Process Problem Solving, Material Management, and Continuous Improvement. You will be able develop Lean strategies, create a Master Schedule, initiate activities for supporting goals and objectives, and complete a Train-the-Trainer class as well as achieve facilitation skills to teach, communicate, guide, and lead Lean overview training as well as comprehensive subject-matter training. In addition, you will understand how the Lean Discipline Expert process can help to support associate involvement at all levels and learn where and how the nine principles overlap and interact. By engaging and empowering various levels of associates throughout the organization, you will provide strength and ownership for your business and, most importantly, your associates. The book includes access to additional resources on the book's page at www.crcpress.com. It includes a tracking mechanism for monitoring candidate progress, facilitation feedback forms, LDE checklists, and certificates of accomplishment you can use to acknowledge associates that achieve Lean Discipline Expert status.

The purpose of the 2012 3rd International Asia Conference on industrial engineering and management innovation (IEMI2012) is to bring together researchers, engineers and practitioners interested in the application of informatics to industrial engineering and management innovation.

Trust and Power on the Shop Floor examines the shop floor processes of modern factories through two case studies. Maarten Verkerk draws on ethnography, organizational theory, and philosophy to offer an insightful analysis of how high-trust and high-power relations between management and labor are the keys to successful organizations. Verkerk ultimately offers a masterful study of the dynamics of the modern industrial organization.

Collaborative design has attracted much attention in the research community in recent years. With increasingly decentralized manufacturing systems and processes, more collaborative approaches and systems are needed to support distributed manufacturing operations. "Collaborative Design and Planning for Digital Manufacturing" presents a focused collection of quality chapters on the state-of-the-art research efforts in the area of collaborative design and planning, as well as their practical applications towards digital manufacturing. "Collaborative Design and Planning for Digital Manufacturing" provides both a broad-based review of the key areas of research in digital manufacturing, and an in-depth treatment of particular methodologies and systems, from collaborative design to distributed planning, monitoring and control. Recent development and innovations in this area provide a pool of focused research efforts, relevant to a wide readership from academic researchers to practicing engineers.

Si usted quiere entender como se origino el sistema de producci?n Toyota y por que tiene exito, debe leer este libro. Aqui encontrara una introducci?n avanzada del justo a tiempo. El mundo le debe mucho a Taiichi Ohno. Nos ha demostrado como fbricar con mayor eficacia, como reducir costos, como producir una

mayor calidad, y a examinar atentamente como nosotros, en nuestra calidad de seres humanos, trabajamos en una fbrica. El relato que Ohno cuenta en este libro es brillante. Deberia ser leido por todos los gerentes. No es solo un relato acerca de la fabricaci?n; sino tambien sobre como dirigir exitosamente una empresa.

This book outlines the Lean tools needed on the front lines including visual management tools, Gemba walks, standard work, time analysis, kanban, 5S and more. The authors use engaging stories and case studies to demonstrate the effectiveness of shop floor management.

Novel Algorithms and Techniques in Telecommunications, Automation and Industrial Electronics includes a set of rigorously reviewed world-class manuscripts addressing and detailing state-of-the-art research projects in the areas of Industrial Electronics, Technology and Automation, Telecommunications and Networking. Novel Algorithms and Techniques in Telecommunications, Automation and Industrial Electronics includes selected papers from the conference proceedings of the International Conference on Industrial Electronics, Technology and Automation (IETA 2007) and International Conference on Telecommunications and Networking (TeNe 07) which were part of the International Joint Conferences on Computer, Information and Systems Sciences and Engineering (CISSE 2007).

This book reports on innovative strategies for quality control, risk assessment and sustainable development in production processes, in the era of industry 4.0. Based on peer-reviewed contributions to the 7th International Scientific-Technical Conference MANUFACTURING 2022, held on May 16-19, 2022, in Poznan, Poland, the chapters cover important topics relat-

ing to the use of quality management strategies in different stages of the production processes. They report on methods for statistical process control, vision control and inspection of machines, on the application of machine learning methods in quality control and/or risk assessment, on issues relating to digital transformation, and on methods to improve occupational safety. Besides industrial applications, the book also discusses the use quality management tools for educational purposes. By bridging between concepts in quality engineering, ergonomics, digitalization and industry 4.0, this book offers an authoritative source of information for researchers, engineers and managers.

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accessible to everyone by presenting major concepts and tools in simple, clear language and at a reading level that has been adjusted for operators by skilled instructional designers. One main idea is presented every two to four pages so that the book can be picked up and put down easily. Each chapter begins with an overview and ends with a summary section. Helpful illustrations are used throughout. Other topics in the Shopfloor Series: Kanban, 5S, Quick Changeover, Mistake-Proofing, Just-in-Time, TPM, Cellular Manufacturing

A scheduling system for Lean and just-in-time production, Kanban is a proven tool for reducing waste, inventory, and lead times. The implementation of Kanban, however, is a manually intensive action and conducting Kanban projects properly takes experience and direction. Until now, there has been a need for a book with detailed step-by-step guidelines on how to properly implement Kanban. Complete with color images, The Kanban Playbook: A Step-by-Step Guideline for the Lean Practitioner fills this need. This new book in The LEAN Playbook Series is your guide to proper Kanban implementation. It is ideal for Lean practitioners and facilitators looking for a training tool and guideline that can be used in the work area while improvements are being made. Like a football coach, you can use this playbook for quick reference to convey what's needed to facilitate effective Kanban projects. If for some reason you forget a "play" during the implementation, you can easily reference the playbook. You can follow page by page and use the playbook to facilitate successful Kanban projects, or you can go directly to certain topics and use it to help you implement that particular "play." The playbook includes color images from actual Kanban implementations. In addition

to the images, a combination of short paragraphs and bulleted points walk you step by step through the process of implementing Kanban to reduce waste and bring about remarkable changes in your organization. Wasting little time on high-level theory, the book explains how to implement Kanban Card Systems, Two-Bin Systems, and In-Process Kanban (IP-K). Looking for supplemental information or Lean coaching from Chris Ortiz? Go to www.leanplaybooks.com to receive ongoing support and advice on how to use The LEAN Playbook Series for training and implementation.

Many shops have simplified their production control by using card-based systems such as kanban and Constant Work-in-Process (ConWIP). Although these systems provide a simple and highly effective visual approach for controlling manufacturing and service operations, all too many shops struggle with failed implementations or achieve results that fall short. Toyota Production System methods have rendered remarkable results in high-volume manufacturing plants, but they have not been fully understood and correctly applied in high-mix, low-volume environments. While lean principles do apply, the implementation methods and tools must be adapted and alternate methods embraced in a low-volume environment. This volume is specifically geared for manufacturers that have hundreds to thousands of active part numbers with few or no ongoing forecasted volumes, and for job shops that build only to order. The primary focus is eliminating non-value-added activities and instituting improvements on the most repetitive jobs, a strategy that gives you more time to produce your low-volume work or one-offs. About the author: Greg Lane is a faculty member of the Lean Enterprise

Institute and an advisor to the Instituto de Lean Management in Spain. During his time with Toyota, he was one of a handful of candidates selected for a one-year training program conducted by the company's masters. He became certified as a Toyota Production System (TPS) Key Person and continued his work with Toyota, training others in TPS. He has been highly active in working on implementing lean around the world, supporting large and small companies alike. In 1998, he began to focus his lean endeavors on meeting the specific needs of high-mix, low-volume enterprises. During his time as an independent consultant, Greg purchased and operated his own manufacturing company, which specialized in fast turnaround on high-mix, low-volume parts. Greg used TPS to grow the business and nearly double its sales. Greg and his associates have experience not only at adapting the methods contained in this book, but also in applying other tools that are too numerous to detail here. They can be reached for further support with your lean transformation via email: glane@lowvolumelean.com

Following in the footsteps of its popular predecessor, the second edition of this workbook explains how to apply kanban replenishment systems to improve material flow. *Kanban for the Supply Chain: Fundamental Practices for Manufacturing Management, Second Edition* provides readers with a detailed roadmap for achieving a successful and sustainable kanban implementation. Detailing the steps required for each stage of the manufacturing and supply chain management process, this updated edition focuses on creating an environment for success. It addresses internal mechanisms, including leveling production schedules, as well as external elements, such as conducting a thorough analysis of cus-

customer demand. Numerous techniques are presented for setting up kanban that consider a wide array of material types, dimensions, and storage media. This edition presents a wealth of new tools and techniques useful across the broad spectrum of manufacturing environments, including: A statistical data cleansing technique to remove questionable or irrelevant data from kanban calculations Correlation analysis based on simple Excel techniques to guide the decisions around which part numbers "qualify" for kanban An alternative "stair-step analysis" approach for those who are unable to generate correlation data and prefer to use more readily available monthly demand history An approach to analyze supplier performance data vs. lead time and lot size expectations, with risk mitigation strategies for poor performing suppliers This book is for those who are ready to stop thinking about a conversion from materials requirements planning push techniques to kanban pull techniques and want to make it happen now. Stephen Cimorelli provides actionable advice for installing fundamental kanban concepts that can immediately help you increase manufacturing productivity and profitability. The book includes team-based exercises that reinforce key principles as well as a CD with helpful outlines, charts, figures, and diagrams.

In a "pull" production system, the final process pulls needed parts from the previous process, which pulls from the process before it, and so on, as determined by customer demand. This allows you to operate without preset schedules and avoid unnecessary costs, wastes, and delays on the manufacturing floor. Pull Production for the Shopfloor introduce

Are you ready to implement a just-in-time (JIT) manufacturing program but

need some help orienting employees to the power of JIT? Here is a concise and practical guide to introduce equipment operators, assembly workers, and other frontline employees to the basic concepts, techniques, and benefits of JIT practices. Like all Shop Floor Series books, Just-in-Time for Operators presents concepts and tools in simple and accessible language. The book includes ample illustrations and examples to explain basic JIT concepts and some of the changes people may encounter in a JIT implementation. Key definitions Elimination of process waste Leveled production, kanban, and standard work U-shaped cells and automation JIT support techniques The JIT approach is simple and universal -- it works in companies all over the world. Educating employees ensures their full participation and allows them to share their experiences and ideas more effectively.

The Value Stream Management System simplifies the planning process for lean implementation, ensuring quick deployment and greater success. It links the metrics and reporting required by management with the lean tools needed on the manufacturing floor. The central feature of this illustrative and engaging book is the value stream management storyboard, a tool representing an eight-step process for lean implementation. The storyboard brings together people, tools, metrics, and reporting into one visual document. The authors stress the importance of reaching beyond single-point kaizens to ensure a sustainable lean implementation process. Many people use the value stream map as an individual tool, but not within the context of a proven overall system. Value Stream Management: Eight Steps to Planning, Mapping, and Sustaining Lean Improvements shows you how to use mapping as

part of a complete system for lean implementation. The final outcome of Value Stream Management is the creation of a complete, visual plan for lean transformation - and the mastery of the skills required to implement that plan. Instead of just using Toyota Production System Tools, the authors encourage you to create your own lean production system. Value Stream Management will help you to complete your process and sustain it! BONUS CD! Along with this book you receive a CD containing a lean assessment tool, a storyboard template, useful charts, a team charter, forms, reports, and worksheets. DVD Package (see Catalog No. PP7338) A training aid to implement those principles taught in the book, a training video is available that teaches managers how to train lean teams. It starts with an overview of value stream management and the basics of lean. Subsequent lessons teach how to map current and future states; how to create action plans for implementation and follow-through; and how to develop a storyboard that communicates the entire process. Finally, a computer-generated "virtual factory" shows how the system comes together and how lean actually works. Viewers will see value stream management in action at four major companies. The package includes a facilitator's guide that provides information on how to use the package and an overview of each training module, and a participant guide,

Although Lean and Six Sigma appear to be quite different, when used together they have shown to deliver unprecedented improvements to quality and profitability. The Lean Six Sigma Black Belt Handbook: Tools and Methods for Process Acceleration explains how to integrate these seemingly dissimilar approaches to increase production speed

while decreasing

This book explains how to sustain lean, or, continuous improvement practices. It introduces the BASICS® lean leadership development path, combining the "human aspect" with published BASICS® lean tools. It lays out the methodology to empower, lead, and drive ongoing improvements in your business. The book includes engaging stories and case studies to demonstrate the effectiveness of shop floor management tactics, including visual management tools, gemba walks, standard work, time analysis, kanban, 5S, and more.

This comprehensive and up-to-date text, now in its Third Edition, describes how the latest techniques in production planning and control are applied to contemporary industrial setups so as to meet the ever-increasing demands in industrial organizations for better quality of services, for faster delivery of products and for adapting to the rapid changes taking place in the industrial scenario. With the demands in the industrial arena increasingly tending to be lumpy, the most effective strategy for planning and controlling production processes cannot be a static, preconceived one. Instead, it is one that is flexible and is capable of adapting to the erratic changes in demand patterns. Evolving such a strategy requires more of practical skill than mere theoretical knowledge of the subject. This book explores the demands of the present-day industrial environment and the techniques for addressing these demands through a number of case studies drawn from Indian industries. The efficacy of various planning strategies, the methods for implementing them, and their suitability for different industries have been clearly explained in relation to these cases. While the essentials of theory have

been covered in a simple and straightforward style, the stress is on developing the practical skills required to tackle the unpredictable problems and the unforeseen demands that pose a formidable challenge to modern industries. The book places emphasis as much on the principles of heuristic techniques as on the systematic approach to production planning. This book would serve as a useful textbook to postgraduate students of management as well as undergraduate students of industrial engineering. It will be equally useful to the teaching community and the practicing professionals.

NEW TO THE THIRD EDITION • Includes a new chapter on 'Leagile Manufacturing: A Contemporary Manufacturing Syndrome' (Chapter 11) • Provides several references to explore more in the field

KEY FEATURES • Gives solved problems that serve as numerical illustrations of the theoretical concepts. • The Case Studies given focus on the Indian scenario; these will be of great practical value to students and professionals alike. • Offers substantial coverage of the modern heuristic methods, the Kanban system and the ERP techniques.

Lean Production for Competitive Advantage: A Comprehensive Guide to Lean Methodologies and Management Practices, Second Edition introduces Lean philosophy and illustrates the effective application of Lean tools with real-world case studies. From fundamental concepts to integrated planning and control in pull production and the supply chain, the text provides a complete introduction to Lean production. Coverage includes small batch production, setup reduction, pull production, preventive maintenance, standard work, as well as synchronizing and scheduling Lean operations. Detailing the key principles and practices of Lean production, the text also:

illustrates effective implementation techniques with case studies from a range of industries. Includes questions and completed problems in each chapter. Explains how to effectively partner with suppliers and employees to achieve productivity goals

Designed for students who have a basic foundation in production and operations management, the text provides a thorough understanding of the principles of Lean. It also offers practical know-how for implementing a culture of continuous improvement on the shop floor and in the office, creating a heightened sense of responsibility in all stakeholders, and enhancing productivity and efficiency to improve the bottom line. In this second edition, the author addresses management's role in Lean production. Early observers of Japanese methods focused on the shop floor to see amazing things unlike anything practiced elsewhere. And the thinking was, if the "methods" could be adopted by companies elsewhere, those companies would experience the success of the Japanese. What the early observers hadn't considered were dramatic differences in the way those companies were managed, both daily and strategically. The "management side" of Lean production is addressed in two new chapters, one devoted to daily management, the other to strategy deployment. Additionally, there is a new chapter that addresses breakthrough improvement and an approach to achieving it called Production Preparation Process. Every chapter has been revised and expanded to better tell the story of Lean production—its history, applications, practices, and methods.

In recent years there has been a tremendous upsurge of interest in manufacturing systems design and analysis. Large industrial companies have realized that their manufacturing facilities can be a

source of tremendous opportunity if managed well or a huge corporate liability if managed poorly. In particular industrial managers have realized the potential of well designed and installed production planning and control systems. Manufacturing, in an environment of short product life cycles and increasing product diversity, looks to techniques such as manufacturing resource planning, Just In Time (JIT) and total quality control among others to meet the challenge. Customers are demanding high quality products and very fast turn around on orders. Manufacturing personnel are aware of the lead time from receipt of order to delivery of completed orders at the customer's premises. It is clear that this production lead time is, for the majority of manufacturing firms, greatly in excess of the actual processing or manufacturing time. There are many reasons for this, among them poor coordination between the sales and manufacturing function. Some are within the control of the manufacturing function. Others are not.

The control of manufacturing operations is of crucial importance in industry. The correct regulation of manufacturing activities makes the difference between meeting and missing customer requirements. Nowadays computerised solutions are available as an aid to production management. However, many companies proceed to use sophisticated computer tools without first understanding the basic operating principles. This book is written for students of manufacturing systems as well as people in industry who need a concise explanation of the concepts of Computer Aided Production Management (CAPM) or who may be looking for new ideas.

To enhance and sustain its Lean journey, a company must implement information

systems that fully support and enhance the Lean initiative. In *Easier, Simpler, Faster: Systems Strategy for Lean IT*, Jean Cunningham and Duane Jones introduce the case study of an actual Lean implementation involving the IT system of a mid-size manufacturer, highlighting the IT challenges that the manufacturer faced during the Lean transformation. Winner of a Shingo Prize, this book will provide you with a broader vision as well as a path to what a Lean system environment will look like for your company.

Cellular Manufacturing: One-Piece Flow for Workteams introduces production teams to basic cellular manufacturing and teamwork concepts and orients them for participating in the design of a new production cell. Use this book to get everyone on board to reduce lead time, work-in-process inventory, and other profit-draining wastes. Each chapter includes an overview and a summary to reinforce concepts, as well as reflection questions, which can be used to encourage group discussions. This volume is part of Productivity Press' Shopfloor Series, which offers a simple, cost-effective approach for building basic knowledge about key manufacturing improvement topics

"This book explores the recent advancements in the areas of lean production, management, and the system and layout design for manufacturing environments, capturing the building blocks of lean transformation on a shop floor level"--

This is the Leader's Guide that accompanies the Kanban for the Shopfloor Learning Package.

Lean MRP explains how to establish ERP production scheduling that is stable and effective. The fundamental roles of the production schedule for driving shop floor work, predicting manufacturing

completions, and evaluating factory capacity are examined. With effective ERP production scheduling in place, an opportunity is created to implement a Lean manufacturing pull system on the shop floor that mimics the behavior of traditional kanbans. This essentially establishes a self-regulating traffic control system that will reduce congestion and travel times for materials and products in a factory. This is not the usual "yada-yada". The concept of Lean MRP is a novel one, which holds the promise of transformational change particularly in job shop environments. In addition to attaining the on-time performance, inventory, and lead time benefits of a pull system, Lean MRP can also help improve the accuracy of forward-looking schedule projections to support the making of reliable promises to the customer. This book is for those manufacturing managers who have always strived for a Lean operation but nevertheless feel that a computerized ERP system offers a more practical and scalable solution for managing a large, complex, and/or turbulent shop floor. Manufacturers in high mix industries such as contract manufacturing, aerospace, or industrial equipment can particularly benefit from this novel and innovative approach. For them, the prospects of Lean MRP offer an exciting opportunity to positively and comprehensively transform the whole of their operation as opposed to accepting isolated islands of Lean improvement that only skirt the pe-

riphery of the scheduling, on-time performance, inventory, and lead time challenges they face.

Toyota's world-renowned success proves that just-in-time (JIT) makes other manufacturing practices obsolete. This simple but powerful book is based on the seminars given by Taiichi Ohno and other senior production staff to introduce Toyota's own supplier companies to JIT. It teaches the philosophy and implementation of what many call the most efficient production system in the world. Provides a clear structure for an introductory JIT training program. Explains every aspect of the JIT system, including how to set it up and how to refine it once it's in place. Shows how to use a simple visual system to control the production process. Every day more American companies are learning that JIT works outside Japan. Now you can get started with this step-by-step book which guides you through the implementation process. Every engineer, manager, supervisor, and worker should read this book to get the clearest, simplest, and most complete introduction to JIT available in English. Results at American companies after reading this book: Lead-time on one product was reduced from 12 weeks to 4 days. Setup time on a large blanking press was reduced from eight hours to one minute and four seconds. Work-in-process has been reduced 50 percent plant-wide. Factory floor space was opened up 30 to 40 percent in every one of their plants.