Manufacturing Processes for Textile and Fashion Design Professionals

Rob Thompson 2014-10-01 This fundamental resource for all textile and fashion designers explores over 70 production techniques and over 60 materials used in textile and fashion design. Organized into four main parts Yarn and Fibre Technology, Fabric Technology, Fashion Design Technology and Garment Technology, the book covers all aspects of manufacturing processes and equipment for textile manufacturing. In parts 1 and 2, over 70 major processes are explained in detail, each featuring a technical description, an analysis of the applications, design considerations and possible improvements. Each process chapter ends with a summary of the control aspects and their impact. All of the processes feature detailed step-by-step case studies showing how the process either occurs or is manufactured at a leading production facility. Part 4 features essential knowledge on over 60 natural and synthetic materials.

Textile Manufacturing: Processes and Techniques

Bhushan Majeed 2017-11-27 Complex raw materials and manufacturing processes mean the textile industry is particularly dependent on good production process to produce high and consistent product quality. Monitoring and controlling production processes during the textile manufacturing process also minimizes waste, costs and environmental impact. Process control in textile manufacturing provides an important overview of the fundamentals and applications of process control methods. Part one introduces key issues associated with process control and principles of control systems in textile manufacturing. Testing and statistical quality control are also discussed in detail before part two goes on to consider control in fibre production and yarn manufacture. Chapters review process control and quality control in natural and synthetic textile fibres, blending, carding, drawing and combing. Process control in ring and winding and maintenance of yarn spinning machines are also discussed. Finally part three explores process control in the manufacture of knitted, woven, nonwoven textiles and coating finishing processes. With the growth of large-scale textile manufacturing the need for quality assurance and quality control is becoming more and more important. Process control in kaolin and kaolinite is also discussed. Process control in textile manufacturing is an essential guide for textile engineers and manufacturers involved in the process of textile manufacturing, as well as academic researchers in this field. Provides an important overview of the fundamentals and applications of process control methods Discusses key issues associated with process control and principles of control systems in textile manufacturing before addressing testing and statistical quality control Explores essential knowledge on over 60 materials used in textile and fashion design.

Design of Clothing Manufacturing Processes

Jellia Garlick 2013-07-17 The era of mass manufacturing of clothing and other textile products is coming to an end; what is emerging is a post-industrial production system that is goal oriented, customised, volume production, where the conventional boundaries between product design, production and user are beginning to merge. To continue developing knowledge on how to design better products and services, we need to design better manufacturing processes. Part one introduces key issues associated with process control and principles of control systems in textile manufacturing. Testing and statistical quality control are also discussed in detail before part two goes on to consider control in fibre production and yarn manufacture. Chapters review process control and quality control in natural and synthetic textile fibres, blending, carding, drawing and combing. Process control in ring and winding and maintenance of yarn spinning machines are also discussed. Finally part three explores process control in the manufacture of knitted, woven, nonwoven textiles and coating finishing processes. With the growth of large-scale textile manufacturing the need for quality assurance and quality control is becoming more and more important.

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Garment Manufacturing

Prasanta Sarkar

Apparel Manufacturing Technology

T. Kethral 2018-05-08 This book aims to provide a broad conceptual and theoretical perspective of apparel manufacturing processes starting from raw material selection to packaging and dispatch of goods. Further, engineering practices followed in an apparel industry for production planning and control, line balancing, implementation of industrial engineering concepts in apparel manufacturing, merchandising activities and product costing have been included, and they will serve as a foundation for future apparel professionals. The book addresses the technical aspects in each section of garment manufacturing processes with considerable depth and detail. This book also covers the production planning process and production control activities. It addresses the technical aspects in each section of garment manufacturing processes with considerable depth and detail.

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The Global Textile and Clothing Industry
Roshan Shaboo 2012-07-17 Advances in technology, combined with the ever-evolving needs of the global market, are having a profound impact on the global textile and clothing industry. The textile and clothing industry provides an essential review of these changes, and considers their implications for future strategies concerning production and marketing of textile products. Beginning with a review of trends in the global supply chain, the book discusses the importance of innovative research and development, and the role of strategic technology roadmaping. Both the present structure and future adaptation of higher education courses in textile science are reviewed, before recent advances in textile manufacturing technology, including joining techniques, 3D body scanning and garment design, are explored. Finally, the global textile and clothing industries combine to consider autogenous textile processing technology for the mass production of fibre-reinforced polymer (FRP) composites. With its distinctive editorial and international team of expert contributors, the book provides an accessible, comprehensive, and current overview of the technology used in the textile and clothing industries.

Non-woven Fabrics
Wilhelm Albrecht 2006-03-06 From the utilization of textile waste to the high-tech product - this is how nonwovens can be best described. Web formation and web bonding processes have recently been enhanced. Nowadays, fibres, granules, binder and finishing agents are used. This development entails a wider range of applications in the fields of hygiene, medicine, the garment producing and building industries, interior design as well as further technical uses. This book provides comprehensive information about nonwovens, from the raw material fibres via the manufacturing processes to finishing and to the ready-made product. Nonwovens are a new and fast-growing classification of materials that have many applications in different industrial fields such as hygiene, medicine, building, automotive and other fields.

Handbook of Sustainable Textile Production
Marion F. Huber-Ruhr 2011-06-27 Textile products are produced, distributed, sold, and used worldwide. A quantitative assessment of sustainability in the textile manufacturing chain is therefore timely and important. This handbook deals with a wide range of issues that are important for the sustainability of the textile industry: technical, chemical, and environmental data from the various stages of textiles in this chain. This authoritative reference work provides a detailed study of the sustainable development of textile production. The book opens with an introduction and its use in legislation and industry before going on to investigate the impact of textiles through the supply chain, starting with the raw fibre through to fabrication, production, consumption and disposal. Textile process technology and methods for specifying quality and functions in textile products in order to reduce textile waste and improve sustainability are also examined. A handbook that is unusually recognised expert authors. The Handbook of sustainable textile production is a valuable reference for academics and students as well as for companies across the textile supply chain concerned with developing a sustainable environment, from fibre manufacturers and designers to regulatory bodies. A comprehensive and up-to-date reference for the design, development and technical, chemical, and environmental data from the textiles in the manufacturing chain. Chapters cover the principles of sustainability and its use in legislation and industry, textile process technology, the impact of textiles through the supply chain, raw fibre through to fabrication, production, consumption and disposal.

Textile Manufacturing Processes
Pulsu Udita 2019-12-02 Textile manufacturing is an important subject in textile processes and processing industries. The book offers the basic knowledge of textile manufacturing processes that are used in various industries. It gives an overview of the most common processes available today. In addition, new fibre development has brought about new machines for producing fabrics, yarns, and garments. Textile Manufacturing Processes is a textbook for diploma students, engineering students, and also all those who are interested in the field of manufacturing processes. The book is divided into a few chapters where each chapter discusses the various steps involved in the process with the help of diagrams, tables, and figures.

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manufacturing processes of textile and fashion design book

**Textiles in the Textile Industry**

*Subramanian Senthilkannan Muthu* 2016-10-14 This book examines in detail key aspects of sustainability in the textile industry, especially environmental, social and economic sustainability in the textiles and clothing sector. It highlights the various faces and facets of sustainability and their implications for textiles and the clothing sector.

**Environmental Considerations of Selected Energy Conserving Manufacturing Process Options: Textile industry report**

*Industrial Environmental Research Laboratory (Cincinnati, Ohio)* 1976

**Textile and Clothing Design Technologies**

*Tom Cassidy* 2017-11-15 In the textile industry, there is a pressing need for people who can facilitate the translation of creative solutions from designers into manufacturing language and data. The design technologist has to understand the elements and principles employed by designers and how these change for various textile media. One must also have a good understanding of the processes, materials and products for which the textile designer is required to produce creative solutions. This book will be for designers wishing to improve their technological knowledge, technologists wishing to understand the design process, and anyone else who seeks to work at this design-technology interface. Key Features: • Provides a comprehensive information about textile production, apparel production and the design aspects of both textile and apparel production. • Fills the traditional gap between design and manufacture changing with advanced technologies. • Includes brief summary of spinning, weaving, chemical processing and garmenting. • Facilitates translation of creative solutions from designers into manufacturing language and data. • Covers set of workshop activities.

**Medical and Hygiene Textile Production**

*Allison Malches 1994* Part of a series which aims to present basic information about all aspects of small-scale textile manufacturers from raw materials to finished items. This book considers the production of medical and hygiene textiles on a small scale in developing countries.

**Joining Technologies**

*Mahadzir Ishak* 2016-09-21 Joining and welding are two of the most important processes in manufacturing. These technologies have vastly improved and are now extensively used in numerous industries. This book covers a wide range of topics, from arc welding (GMAW and GTAW), FSW, laser and hybrid welding, and magnetic pulse welding on metal joining to the application of joining technologies for textile products. The analysis of temperature and phase transformation is also incorporated. This book also discusses the issue of dissimilar joint between metal and ceramic, as well as the technology of diffusion bonding.

**Recent Developments in the Field of Carbon Fibers**

*Rita Khanna* 2018-07-23 Carbon fibres are lightweight, chemically stable materials with high mechanical strength, and have state-of-the-art applications in aerospace, marine, construction and automotive sectors. The demand for carbon fibres-based components is expected to grow dramatically with expanding opportunities for lightweight metals and composites. Although this field has achieved a high level of maturity, nanoscale developments in carbon fibres have seen dramatic improvements in the functions of conventional inorganic materials and composites. This book reveals several new developments in the field to enhance characteristics of carbon fibres and their composites, novel applications for tissue engineering, biological scaffoldings and implants, recycling and reuse of end-of-life CFRP and manufacturing waste and other issues of concern in the field of carbon fibres.

**Textiles and Fashion**

*Rose Sinclair* 2014-11-08 This major textbook is designed for students studying textiles and fashion at higher and undergraduate level, as well as those needing a comprehensive and authoritative overview of textile materials and processes. The first part of the book reviews the main types of natural and synthetic fibres and their properties. Part two provides a systematic review of the key processes involved first in converting fibres into yarns and then transforming yarns into fabrics, and then the final part of the book looks specifically at the transformation of fabric into apparel, from design and manufacture to marketing. With contributions from leading experts in their fields, this major book provides the definitive one-volume guide to textile manufacture. Provides comprehensive coverage of the types and properties of textile fibres to yarn and fabric manufacture, fabric finishing, apparel production and fashion. Focused on the needs of college and undergraduate students studying textiles or fashion courses. Each chapter ends with a summary to emphasise key points, a comprehensive self-review section, and project ideas are also provided.