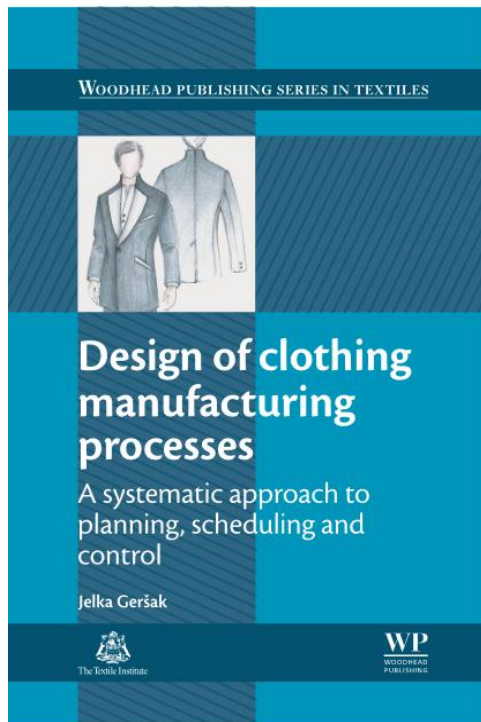


# DESIGN OF CLOTHING MANUFACTURING PROCESSES

A systematic approach to planning, scheduling and control



Details of the book:

Author: Prof. Dr. sc. Jelka Geršak

Publisher: Woodhead Publishing Limited, Cambridge

ISBN 978-0-85709-778-1

eBook ISBN 978-0-85709-783-5

:

## From the Preface

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 able to achieve the goal of mass-customised, low volume production, where the conventional borders 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 clothing manufacturing processes grounded in science, technology, and management to help the clothing industry to compete more effectively. Design of clothing manufacturing processes reviews key issues in the design of more rapid, integrated and flexible clothing manufacturing processes.

The eight chapters of the book provide a detailed coverage of the design of clothing manufacturing processes using a systematic approach to planning, scheduling and control. The book starts with an overview of standardised clothing classification systems and terminologies for individual clothing types. Chapter 2 explores the development of standardised sizing systems. Chapter 3 reviews the key issues in development a garment

collection. These chapters provide the context for designing particular clothing manufacturing processes.

The following chapters discuss particular aspects in the design of clothing production operations. Chapter 4 discusses key terms and roles in clothing production planning and organisation. It reviews issues and documentation in design analysis and activity planning. The specific issues in the design of pattern making and cutting operations are discussed in Chapter 5. Chapter 6 deals with planning clothing manufacturing operations, including the selection of particular techniques and equipment as well as different process layouts. Production scheduling, monitoring and control are covered in Chapter 7. The last Chapter provides an overview of quality requirements for clothing textile materials, definitions and minimum quality standards.

Design of clothing manufacturing processes is intended for R&D managers, researchers, technologists and designers throughout the clothing industry, as well as academic researchers in the field of clothing design, engineering and other aspects of clothing production.

- Considers in detail the design of sizing and classification systems
- Discusses the planning required in all aspects of clothing production from design and pattern making to manufacture
- Overviews the management of clothing production and material quality requirements

## **Table of Contents**

### **Design of Clothing Manufacturing Processes, 1st Edition**

Woodhead Publishing Series in Textiles

Preface

Chapter 1: Clothing classification systems

Abstract:

1.1 Introduction

1.2 General clothing classification

1.3 Harmonised clothing classification systems

1.4 Classification of functional clothing

1.5 Conclusions

Chapter 2: Clothing sizing systems

Abstract:

2.1 Introduction

2.2 Clothing size and designation systems: a chronological review

2.3 European and international sizing systems

2.4 ISO clothing sizing systems

2.5 European designation of clothing sizes

2.6 The JUS clothing sizing systems

2.7 Conclusions

Chapter 3: Key issues in developing a garment collection

Abstract:

3.1 Introduction

3.2 New product development

3.3 Garment collection development

3.4 Developing the concept for a new collection

3.5 Collection development management and control

- 3.6 Design and manufacturing requirements for a collection
- 3.7 Design aspects of functional protective clothing: a case study
- 3.8 Fashion trade fairs and garment collections
- 3.9 Conclusions

#### Chapter 4: Planning and organisation of clothing production

Abstract:

- 4.1 Introduction
- 4.2 Production planning and organisation within a company
- 4.3 Clothing-design analysis and activity planning
- 4.4 Key documentation
- 4.5 Conclusions

#### Chapter 5: Planning of clothing design, pattern making and cutting

Abstract:

- 5.1 Introduction
- 5.2 Constructing garment patterns
- 5.3 Pattern-pieces and their preparation
- 5.4 Pattern cutting-markers
- 5.5 Designating cutting-markers
- 5.6 Defining fabric and other parameters
- 5.7 Technological requirements when arranging pattern-pieces within a cutting-marker
- 5.8 Cutting-marker efficiency
- 5.9 Fabric losses outside the cutting-marker
- 5.10 Determining fabric consumption
- 5.11 Conclusions

#### Chapter 6: Planning clothing manufacturing

Abstract:

- 6.1 Introduction
- 6.2 Analysis of clothing manufacture requirements and selection of appropriate equipment
- 6.3 Joining technologies
- 6.4 Work analysis
- 6.5 Identifying work methods
- 6.6 Selecting processing equipment
- 6.7 Types of sewing machine
- 6.8 Determining standard time
- 6.9 Planning manufacturing operations
- 6.10 Planning clothing assembly
- 6.11 Planning a process system for manufacturing operations
- 6.12 Planning clothing manufacturing processes
- 6.13 Conclusions

#### Chapter 7: Clothing production management

Abstract:

- 7.1 Introduction
- 7.2 Determining production capacity needs
- 7.3 Production planning
- 7.4 Production scheduling
- 7.5 Production monitoring and control
- 7.6 Costs in production planning and management
- 7.7 Controlling production planning and management
- 7.8 Conclusions

#### Chapter 8: Quality requirements for clothing materials

Abstract:

- 8.1 Introduction
- 8.2 Quality requirements for textile materials for clothing
- 8.3 Physical characteristics: types, methods of measurement and tolerances

8.4 Performance characteristics: types, methods of measurement and minimum quality standards

8.5 Visible faults

8.6 Care labelling of clothing and textile products

8.7 Ecological labelling of clothing and textile products

8.8 Conclusions

Index