

Contents

Preface	v
---------------	---

PART 1

Chapter 1: Introduction	3
What this book is all about	3
How to use this book	5
Chapter 2 Efficient materials storage and handling	7
Better organized storage	7
If in doubt, take it out	7
Avoid placing materials on the floor	7
Gain productive space by introducing multi-level racks	10
Provide a place for each tool and work item	10
Fewer, shorter and more efficient transport and handling operations	12
The more you use it, the closer it should be	12
Provide containers for operation outputs and inputs	13
Use mobile storage	14
Clear and mark passageways	15
Fewer and more efficient lifting operations	15
Don't lift loads higher than necessary	15
Move materials and perform tasks at working heights	18
Make lifting more efficient and safer	18
Chapter 3 Practical workstation and product design	21
Placing materials, tools and controls within easy reach	21
Improve work posture for greater efficiency	23
Design your garments for easy assembly, low waste and high quality	28
Use guides to easily check measurements of pieces and garments	28
Use jigs and other devices to save time and effort	29
Improve displays and controls to minimize mistakes	32
Chapter 4 Productive machine safety, maintenance and environmental control	35
Give your machines a productivity check	35
Machine safety	35
Purchase safe machines	37
Maintain machines properly	38
Teach workers to troubleshoot common machine problems	39
Environmental control measures	42
Clean regularly and properly – do not spread dust	42
Make local ventilation cost-effective	43
Replace a dangerous substance with a safer one	44

Chapter 5 Good lighting for quality products.....	45
Make full use of daylight	45
Avoid glare	47
Choose an appropriate visual work background	47
Find the right place for light sources	49
Use the right lighting device and fixture	50
Avoid shadows	50
Ensure regular maintenance	53
Chapter 6 Premises suited to production	55
Protect your premises from outside heat and cold	55
Let nature help you	57
Improve the heat reflection of the walls and roof	57
Improve heat insulation	57
Use shades to protect against heat from the sun	57
Let natural air-flow improve ventilation	58
Make better use of horizontal air-flow	58
Utilize the tendency of hot air to rise	61
Improve your floor surface	61
Build flexibility and adaptability into your plant layout	62
Prevent fires and electrical accidents	64
Fire	64
Electrical hazards	65
Chapter 7 Effective work organization	67
Eliminate extra tasks and operations	67
Defeat monotony to keep workers alert and productive	68
Install planned buffers to make the work flow smoothly	68
Ensure work-in-progress is under control	68
The Kanban method	69
Provide adequate training and retraining	70
Design responsible, flexible jobs	70
Specify individual tasks and responsibilities	70
Combine production operations and tasks	70
Set up semi-autonomous or autonomous groups to improve efficiency and reduce supervisory cost	71
Arrange the production layout to meet enterprise objectives	73
Improve the sequencing of your production facilities	74
Choose the most appropriate layout	75
Set up a production progress control system	78
Designing the system	79
Implementing the system	79
Chapter 8 Low-cost work-related welfare facilities and benefits	83
Make sure essential facilities serve their purpose	83
Drinking water	83
Sanitary facilities	85
Be ready for emergencies	86
Make sure that rest means recovery	87
Rest breaks	87
Rest areas	87
Use low-cost facilities to attract and retain the best workers	88
Work clothes	88
Lockers and changing rooms	88
Eating areas	89
Canteens	89
Health facilities	90

Transport facilities	90
Recreational facilities	91
Child-care facilities	91
Birthdays and anniversaries	92
Chapter 9 Ensuring sustainable improvements	93
Develop a complete solution	93
Make sure your ideas will work	93
Mobilize worker support	94
Make improvements which will last	94
Manage change	95
Supervise improvements carefully	95
Make improvement a systematic process	95
Take action	96
Chapter 10 More constructive worker involvement	97
Why should workers be involved?	97
How should workers be involved? Ways and means for a successful approach	98
Provide more information about your enterprise	99
Create conditions for participation	99
Let the workers assess the workplace and express their ideas	99
Implement a small change	100
Set up a core group of workers	100
Involve all workers	100
Provide appropriate training	101
Enrich workers' jobs	101
Organize workers in teams	102
Monitor and review the process	102
PART 2	
Section 1 Useful productivity techniques	105
1. Benefits of productivity measurement	105
2. What is productivity?	106
3. Basic productivity measurement	106
4. How to measure productivity	107
Qualitative productivity indicators	107
Non-standard quantitative productivity indicators	107
Standard productivity indexes	108
5. How to measure output and input	109
6. WISE-PMS application in the garment industry	109
7. Steps in implementing a productivity measurement system	112
Annex to Section 1: Model forms for the WISE Productivity Measurement System	115
Individual production report	115
Group production report	118
Attendance personnel record	120
Delivery performance record	122
Accident record	124
Preventive maintenance record	126
Customer complaints record	128
Energy consumption record	130
Employee turnover record	132

Section 2	Three effective checklists for action	135
Checklist 1: Improving general workplace conditions	136	
Checklist 2: Organizing better sewing workstations	145	
Checklist 3: Involving workers in the process of change	148	
Section 3	An exercise to simulate the use of the Kanban method	151
Section 4	Balancing the production line	153
Section 5	Three techniques for improving your layout	155
The string diagram	155	
The travel chart	156	
Weighted travel charts	159	
Section 6	Checklist 4: How to implement improvements	161
Section 7	Model forms for an action plan	164