

Storage and Control of Stock

Third Edition

Alex Morrison CBE



Storage and Control of Stock

for Industry and
Public Undertakings

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CBE, FCMA, FInstPS, FCIT

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Foreword

The increasing specialization of industry in modern times has progressively enhanced the importance of the subject of this book because of the tendency for firms to concentrate on the manufacture of their own specialist lines and to buy out an increasing proportion of materials either in a semi-processed condition or in the form of finished parts. It has, in fact, been estimated that, in general manufacturing industry, an average of something like sixty per cent of total sales revenue is spent on materials and components, the economic purchase, storage and control of which can make a significant contribution to profit margins.

The development of nationalized industries, the ever-widening range of technical equipment in the Armed Services, and the growing importance of supplies in the activities of central and local government, serve to emphasize the value of adequate storekeeping procedures and stock control in the sphere of public undertakings as well as in industry generally.

The Purchasing Officers Association has long had a keen interest in Storage and Control of Stock and I am pleased to see the increasing tendency towards the establishment of integrated Purchasing and Stores departments, thus providing for users not just separate buying and stores functions but a fully co-ordinated supplies service covering all aspects of material supply.

For many years there has been a great need for an authoritative and comprehensive textbook on the subject for the use of students, and this volume appears to me to be a most effective and timely contribution to the educational facilities available to those engaged in Purchasing and Stores work. Not only does it cover the office techniques of stock control and the physical aspects of storage and handling but it deals also with the position of the supplies department in relation to other activities, and with the organization and management of the stores function.

The author has had long and varied experience in this kind of work and, as President of the Purchasing Officers Association, I am sure that

vi Foreword

this book will be welcomed by all engaged in buying and storekeeping,
and will be invaluable to students.

C. RUSSELL

President

Purchasing Officers Association

Preface to the Third Edition

Generally speaking most of this book has stood the test of time because the fundamental principles of storekeeping do not change. However, some alterations have been made in this edition to bring certain matters up to date and also to add a fair amount of new material about training, industrial logistics, material requirement planning, the systems approach etc. The most important addition is the outline description of a computer system for stores, and for the bulk of this information I am indebted to the Kent County Council and in particular to the County Supplies Officer, Mr J. G. DeKnop.

I am grateful to Mr R. A. Ward for allowing me to use some material from his operational research study on invoice checking. I am also indebted to a number of manufacturers for permission to use their photographs. Extracts from B.S. 826: 1978 Adjustable Shelving, B.S. 2629 Part 1: 1967 and Part 2: 1970 Pallets, and B.S. 565: 1972 Timber are reproduced by permission of the British Standards Institution, 2 Park Street, London W1A 2BS, from whom copies of the complete Standards may be purchased.

Alex Morrison
October 1979

Preface to the First Edition

This book has been written at the request of the Purchasing Officers Association. It is intended mainly for the benefit of students and therefore an effort has been made to touch upon all aspects of storage and control of stock, including departmental organization, physical storekeeping, accounting and recording.

I am grateful to several members of the Purchasing Officers Association for guidance and help in the preparation of this work and in particular to Mr C. M. G. Allen, CBE and Mr P. J. Brown, who have criticized the script in detail.

I am greatly indebted to the National Coal Board for allowing me full and free access to their Purchasing and Stores Department Manual of Procedure, which proved of material assistance in the preparation of this textbook. I am also pleased to acknowledge the co-operation of a number of manufacturers of storage and handling equipment who have generously provided illustrations.

Alex Morrison

List of Plates

- 1 Storage fixture with trays suitable for random storage.
- 2 (*above*) Double-tiered binning. (*below*) Adjustable-type pallet racking.
- 3 (*above*) Pigeon-hole bar and tube racks. (*below*) Vertical-type bar and tube racks.
- 4 Vertical sheet storage rack.
- 5 Drum racks suitable for use with fork-lift trucks.
- 6 Open-type shelving.
- 7 (*above*) Bundles of rod and tube are slid out from a live storage installation on to an order picker fitted with a run of roller conveyor. (*below*) Industrial tractor with trailers.
- 8 (*above*) Mobile drum tilts. (*below, left*) Hand truck. (*below, right*) Hand-operated stillage truck.
- 9 An electric chain hoist with electric-powered travel, used for handling steel bars. Antler-type bar and tube racks in background.
- 10 (*above*) Hand-operated stacker. (*below*) Pedestrian-operated pallet transporter.
- 11 Heavy-duty fork-lift truck.
- 12 Reach-type fork-lift truck.
- 13 (*above*) Side-operating fork-lift carrier. (*below*) Fork-lift truck fitted with front end load push pull attachment.
- 14 (*above*) Fork-lift truck fitted with special clamp for handling oil drums. (*below*) Magnet crane handling scrap steel.
- 15 (*left*) Grab crane handling coal into railway wagons. (*right*) A monorail stacker crane with telescopic mast for handling coils of sheet metal in a store with open racking.
- 16 (*above*) An all-hydraulic mobile materials handling crane, lifting steel ducting in a stockyard. (*below*) Semi-goliath stockyard crane with magnet beam and limited swing rope reeving operating in conjunction with a cross chain loading conveyor.
- 17 (*above*) A heavy-duty console controlled crane, with limited swing rope reeving arrangement and vacuum lifting beam for handling

- stainless steel. (*below*) A double girder general duty electric overhead travelling crane with a twin girder construction.
- 18 (*above*) Overhead towline conveyor. (*below*) Mobile belt conveyor.
 - 19 Storage and retrieval units showing the 'picking face' with operator work stations. (*below*) Miniload stacker crane.
 - 20 Retrieval unit used for storage of tools and fittings for wholesale distribution.
 - 21 Automated conveyor system comprising belt conveyor and roller conveyors.
 - 22 (*above*) Random access disc pack. (*below*) Magnetic tape files containing magnetic tape reels.
 - 23 (*above*) High-speed line printer. (*below*) Visual display units.
 - 24 (*above*) Central processor. (*below*) Teletype console.

Contents

PAGE

<i>Foreword</i>	v
<i>Preface to the Third Edition</i>	vii
<i>Preface to the First Edition</i>	viii
<i>List of Plates</i>	xiv
1 The Stores Function	1
Purpose · Responsibilities · Organization · Position within the supply organization · Relationship with other departments	
2 Identification of Stores	10
Definitions · Coding of stores · Vocabulary · Advantages of a coding system · Code symbols and their interpretation · Methods of coding · Example of a stores code · Characteristics of an efficient code · Organizing a vocabulary · Specification · Standardization	
3 Receipt and Inspection	32
Receipts from outside suppliers · Advice, consignment and packing notes · Checking for quantity · Goods inwards books · Goods received notes · Damage and shortages · Packageslips · Internal transfers · Returns to store · Scrap arisings · Inspection before and after delivery · Marshalling of incoming goods · Receipt of capital items	

4 Issue and Dispatch

46

Authorization of issues · Identification of requirements · Timing of issues · Methods of issue for internal use · Issues on request · Scheduled issues to production · Assemblies and kits · Imprests · Replacements · Loans · Issue to employees on payment · Allocations · Capital issues · Transfers · Delivery and collection · Dispatch of goods outside the organization · Finished products sent to customers · Repairs and sales of scrap · Free issues to suppliers · Stores advice notes · Cost allocation · Selection · Marshalling · Dispatch

5 Stock Records

60

Purposes of stock records · Bin cards · Stock record cards · Form of records · Availability · Duplicate records · Stock review cards · Stock recording systems · Basic considerations · Hand-posted stock recording systems · Machines for stock recording · Keyboard ledger-posting machines · Mechanized punched-card installations · Electronic computers

6 Stores Accounting

82

Value of stores in stock · Basis of material costing · Methods of pricing issues · Cost, average, market and standard price · Arrangement of stores accounts · Stock records · Control accounts · Main stock account · Variation account · Provisions for price variation, obsolescence and deterioration · Stock in the final accounts · Inflation accounting

7 Stock Control

99

Definition · Assessment of items to be held in stock · Reasons for holding stock · General stock list · The extent of stockholdings · Operational needs and availability of capital · Cost of storage · Quantity

control · Factors influencing control by quantity · Provisioning · Stock levels · Cyclical provisioning · Programming deliveries · Spares scalings · Ordering quantities · Transfer lists · Visual stock control · Value control · Stores charge · Stock targets · Control accounts · Commitment records · Responsibility for stock control · Budgetary control · Financial results of effective control

8 Stocktaking and Stock Checking 124

Definitions · Physical security · Responsibility for stock · Purposes of stocktaking · Periodic stocktaking · Stock sheets · Continuous stocktaking · Stocktaking procedure · Treatment of discrepancies · Obsolescence and redundancy · Deterioration of materials in store · Stock checking

9 Stores Buildings 140

New buildings · Large central storehouses · Siting · Construction · Storehouses serving one factory or operating unit · Siting · Construction · Existing stores buildings · Hiring of storage accommodation

10 Stockyards 151

The need for adequate stockyards · Construction of stockyards · Siting · Surfacing · Lighting · Fencing · Fire precautions · Layout · Buildings and enclosures within the stockyard

11 Storage Equipment 157

Adjustable steel shelving · Multi-tier binning · Trays · Pallets · Racks · Containers · Measuring equipment

12 Materials Handling **172**

Basic considerations · Packaging methods · Economy of movement · Selection of suitable machines · Assessment of handling problems for mechanization · Storehouse layout · Training of operators · Hand-operated equipment · Power-driven equipment · Standardization of handling equipment · Care of lifting tackle

13 Storehouse Operation **197**

Security · Custody of keys · Access to premises · Marking of stores · Fire precautions · Knowledge of materials · Prevention of deterioration · Fixed and random storehouse location systems · Departmental stores · Work-in-progress stores · Sub-stores · Special storage facilities · Explosives · Petroleum spirit · Centralization · Advantages and disadvantages of central stores

14 Stores Manuals of Instruction **220**

Need for manuals of instruction · Advantages and disadvantages · Preparation and content of the manual · Standard forms · Flow charts · Duty sheets · Consultation with other departments · Publication and distribution · Implementation · Amendments and additions

15 Other Techniques **232**

Operational research · Value analysis · Vendor rating · Industrial logistics · Materials requirements planning (MRP) · Systems approach · The ABC theory

16 Automation **266**

Automation of paperwork · Outline description of a computer system for stores · Video terminals (VDUs) · Operations done by the data processing system · On-line

system · Future prospects · Automation of warehouse work

Appendix/History of a Consignment 295

A chronological description of the practical day-to-day transactions involved in connexion with the receipt, issue and control of a particular consignment of stores

Index 305

1 The Stores Function

There is no standard system of storekeeping which can be universally recommended or applied but, in the course of time, certain principles and practices of more or less general application have been evolved. In this book it is proposed to examine at length some of these principles and practices but it must always be borne in mind that the conditions of operation are very diverse.

In a mass production unit, like an automobile factory, vast quantities of materials and component parts have to be provided every day. Large sums of money are involved and it is very necessary to organize the stores function so that the investment is kept to the minimum. A big car plant can use hundreds of thousands of pounds' worth of materials each week. From the stores point of view the most important thing is to keep the incoming goods as near as possible to the amounts the machine shops and assembly shops will use daily. Shortages must be avoided or production lines will have to stop. At the same time too much must not be delivered or it will clog up the warehouses and perhaps also the production area, apart from the fact that excess deliveries will tie up more capital. So the emphasis is on the manufacturing schedule and everything is governed by that. For bulky or expensive materials or components, the flow will have to be managed hour by hour and this demands a very high degree of co-operation and efficiency.

The Armed Services are different. They need to have enough equipment, ammunition and stores on hand to be able to go into action at short notice. The requirement here is not to keep the amount of stock down as far as possible, but to keep it up to the minimum operational requirement. The obvious example is a warship about to set off on a long spell of sea duty. It must be stocked up with fuel, ammunition, food, clothing and everything else that may be wanted during the voyage.

Between these two extremes there is an endless variety of different organizations – jobbing engineering firms, petroleum refineries, mining, process industries, sea, air, rail and road transport, electricity,

gas and water supply undertakings, hospitals, schools, agricultural enterprises and many others.

It therefore follows that before a system of storage and stock control can sensibly be designed, account must be taken of the nature and needs of the organization it is intended to serve.

PURPOSE

The primary objective of the stores function is to provide a service to the operating functions and this must be fully appreciated. All other stores activities, although they have their own relative importance, are subordinate to this main responsibility.

The service given can be analyzed into five parts as follows:

- (i) To make available a balanced flow of raw materials, components, tools, equipment and any other commodities necessary to meet operational requirements.
- (ii) To provide maintenance materials, spare parts and general stores as required.
- (iii) To receive and issue work in progress and finished products.
- (iv) To accept and store scrap and other discarded material as it arises.
- (v) To account for all receipts, issues and goods in stock.

RESPONSIBILITIES

Economy

It has been emphasized that service is the principal objective of the stores function, but it is obviously desirable to provide that service economically. Frequently, but not always, the most important consideration here is to keep the value of stores in stock (i.e. the inventory value) at the lowest practicable level to economize in the use of working capital and to minimize the costs of storage. It will be readily understood that there is some conflict between the need to give a good service and the need to economize in stockholdings. On the one hand, the more stock held, the easier it is to have items available on demand; on the other hand, the more stock held, the greater the cost. It is necessary to seek, find and operate a satisfactory compromise between