

21 世纪大学实用专业英语系列



现代物流英语

Modern Logistics English

杨文辉 主编



Knowledge About Logistics
Transportation Management
Distribution Management
Warehousing Management
International Logistics
International Freight Management
Logistics Information
Logistics Supply and Demand Survey



复旦大学出版社

H 31
300-C₂

现代物流英语

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复旦大学出版社

图书在版编目(CIP)数据

现代物流英语/杨文辉主编. —上海:复旦大学出版社,2007.7
ISBN 978-7-309-05539-9

I. 现… II. 杨… III. 物流-英语 IV. H31

中国版本图书馆 CIP 数据核字(2007)第 097481 号

现代物流英语

杨文辉 主编

出版发行 复旦大学出版社 上海市国权路 579 号 邮编 200433
86-21-65642857(门市零售)
86-21-65100562(团体订购) 86-21-65109143(外埠邮购)
fupnet@fudanpress.com <http://www.fudanpress.com>

责任编辑 栾奇 于文雍

总编辑 高若海

出品人 贺圣遂

印刷 上海复文印刷厂

开本 787×960 1/16

印张 12.25

字数 213 千

版次 2007 年 7 月第一版第一次印刷

印数 1—5 100

书号 ISBN 978-7-309-05539-9/H·1125

定价 18.00 元

如有印装质量问题,请向复旦大学出版社发行部调换。

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前 言

随着我国经济体制改革的深入、经济全球化的发展以及我国日益融入WTO体系,物流业作为现代服务经济的重要支柱和组成部分,必将在我国得到空前发展,并成为我国国民经济新的重要产业和新的经济增长点。

20世纪初,物流理论就为美国的学者所研究,到了50年代得到进一步的发展并传入日本。在80年代,物流理论由日本传入我国,主要应用于物资流通领域;90年代以来,物流成为我国学术界关注和讨论的热点,有关物流的中文书籍已陆续问世。

《现代物流英语》在选材上力求紧贴物流学科的发展趋势,反映现代物流的最新概念、技术与发展。全书由八个单元组成,每个单元包括三课,主要是现代物流理论及物流管理各环节的基本概念与业务知识。本教材设置了课文、单词和词组、专业术语、难点注释等部分,有利于学习者在获得专业知识的同时,提高专业英语的水平。本教材既可作为普通高等学校、高等职业技术学院物流管理和工商企业管理等专业的教材和参考用书,也可作为各类工商企业生产经营管理人员参考用书。

参加本教材编写的人员都是长期从事物流英语教学的教师,具有丰富的物流基础理论与实践知识。

因编者水平有限,错误在所难免,敬请读者批评指正。

编 者
2007年4月

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Unit

I

Basic Knowledge About Logistics

1. The first part of the paper is devoted to a general discussion of the problem of the existence of a solution of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the system of equations (1) has a solution for arbitrary values of the parameters α and β if and only if the condition

$$\alpha + \beta \geq 0 \quad (2)$$

Lesson 1

Unit
I

Text

Introduction to Logistics

The term “logistics”, which originates from America, means “physical distribution” or “goods delivery”. During World War II, the American army established “logistics” theory based on war supplies and applied it into military activities. During the Gulf War of 1991, more than 500,000 soldiers, 500,000 tons of airlift supplies and 3,000,000 tons of sea shipping supplies were collected in worldwide bases and dispatched to pointed places within one month by using the most economical scheme. This huge military activity is regarded as a great model on the application of logistics, and becomes a good example for enterprises to arrange commodity production and distribution. From then on, “logistics” applies widely in commercial activities and becomes a much wider concept including logistics in the process of production and circulation. In the 1950s, Japan introduced the concept of “logistics” from America, and China introduced it from Japan directly up to now.

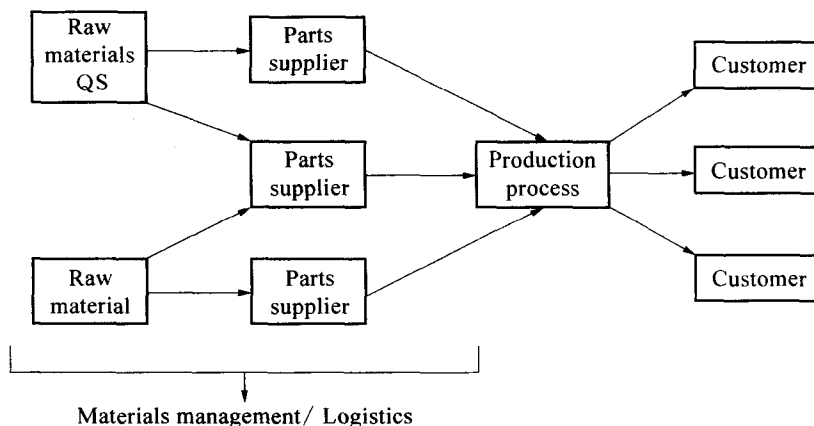


Figure 1-1 Logistics defined as material management

Based on logistics terminologies of the People's Republic of China's National Standard (GB/T18354 - 2001), the definition of "logistics" is: the physical flow process of goods from point-of-origin to point-of-consumption⁽¹⁾ and the effective combination of such basic functions as transportation, warehousing and storage, load and unload, goods handling, packing, distribution processing, delivery, information management, and so on.

According to logistics terminologies, the definition of "logistics management" is: the most cost-effective process of planning, organizing, coordinating and controlling on logistic activities to gain customer's satisfaction.

Specific activities which should be included within logistics management are customer service, traffic and transportation, warehousing and storage, plant and warehouse site selection, inventory control, order processing, distribution communications, procurement, material handling, parts and service support, salvage and scrap disposal,⁽²⁾ packaging, return goods handling, and demand forecasting.

Efficient management of the flow of goods from point-of-origin to point-of-consumption at the macro society or micro firm levels requires successfully planning, implementing, and controlling a multitude of logistics activities.⁽³⁾ The activities may involve raw materials (subassemblies,

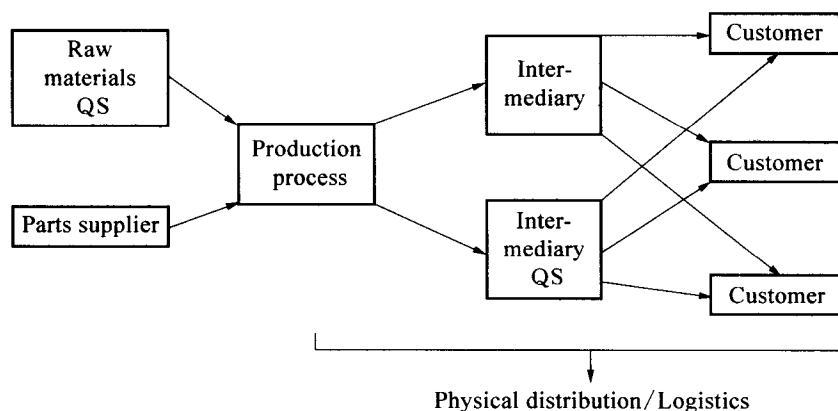


Figure 1-2 Logistics defined as physical distribution



manufactured parts, packing materials, basic commodities), in-process inventory (product partially completed and not yet ready for sale), and finished foods (completed products ready for sale to intermediate or final customers). Effective logistics management enhances the marketing effort of the firm (which can create differential advantage in the marketplace), the efficient movement of products to customers, and time and place utility of products. It can be treated, in accounting terms, as a proprietary asset of the company.

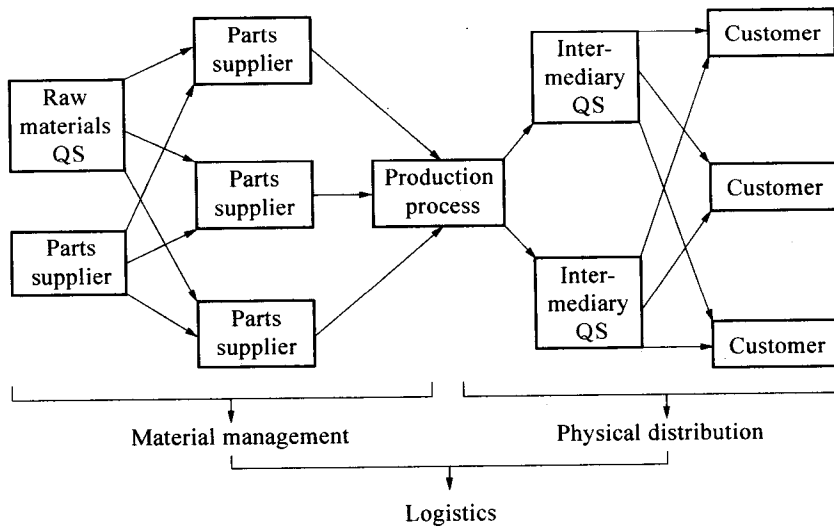


Figure 1-3 Comprehensive definition of logistics

Activities Included in Logistics Management

1. Customer Service

A pioneering study that examined the state of the art of customer service in major corporations defined customer service as “a customer-oriented philosophy that integrates and manages all of the elements of the customer interface within a predetermined optimum cost-service mix⁽⁴⁾.” Customer service acts as the binding and unifying force for all of the logistics management activities. Customer satisfaction — an integral part of customer service will be met if a firm’s overall marketing effort is successful. Each

element of a firm's logistics system can affect whether a customer receives the right product at the right place in the right condition for the right cost at the right time. Thus customer service involves successful implementation of the integrated logistics management concept in order to provide the necessary level of customer satisfaction at the lowest possible total cost.

2. Order Processing

“Order processing may be compared to the human body's central nervous system, triggering the distribution process and directing the actions to be taken in satisfying order demand.” The components of the order processing activity may be broken down into three groups: (1) operational elements, such as order entry/editing, scheduling, order-shipping set preparation, and invoicing; (2) communication elements, such as order modification, order status inquiries, tracing and expediting, error correction, and product information requests; and (3) credit and collection elements, including credit checking and accounts receivable processing/collecting. The speed and accuracy of a firm's order processing have a great deal to do with the level of customer service the company provides. Advanced systems can reduce the time between order placement and shipment from a warehouse or storage facility. In many cases orders are transmitted from the buyer's computer to the vendor's computer. Advanced system, although initially expensive to the company, can substantially improve both order processing accuracy and order response time for some enterprises.

3. Distribution Communications

Success in today's business environment requires the management of a complex communications system. Effective communication must take place between: (a) the firm and its customers and its suppliers; (b) the major functional components of the company — marketing, manufacturing, logistics, and finance/accounting; (c) the various logistics-related activities such as customer service, traffic and transportation, warehousing and storage, order processing, and inventory control; and (d) the various components of each logistics activity (within inventory control, for example, would be in-plant inventory, inventory in transit, and inventory in



field warehouses). Communication is the vital link between the entire logistics process and the firm's customers. Accurate and timely communication is the cornerstone of successful logistics management.

4. Inventory Control

The inventory control activity is critical because of the financial necessity of maintaining a sufficient supply of product to meet both customers' needs and manufacturing requirements. Maintaining raw materials, parts, and finished goods inventory consumes both space and capital. Money tied up in inventory is not available for use elsewhere.⁽⁵⁾ It is sufficient to note that the inventory storage charges can, according to different types of inventory, cover 14% to 50% of the product cost. Successful inventory control should ensure the level of inventory necessary to achieve the desired level of customer service while considering the cost of performing other logistics activities.

5. Demand Forecasting

Demand forecasting involves determining the amount of product and accompanying service that customers will require at some point in the future. The need to know precisely how much product will be demanded is important to all facets of the firm's operations — marketing, manufacturing, and logistics. Marketing forecasts of future demand determine promotional strategies, allocation of sales force effort, pricing strategies, and market research activities. Manufacturing forecasts determine production schedules, purchasing and acquisition strategies, and in-plant inventory decisions. Logistics management forecasts of demand determine how much of each item produced by the company must be transported to the various markets the firm serves. Also, logistics management must know where the demand will originate so that the proper amount of product can be placed or stored in each market area. Knowledge of future demand levels enables logistics managers to allocate their resources (budgets) to activities that will service that demand. Decision-making under uncertainty is less than optimal in most cases because it is extremely difficult to allocate resources among logistics activities without knowing what products and services will be needed.⁽⁶⁾ Therefore it is imperative that the firms undertake some types of demand



forecasting and communicate the results to the marketing, manufacturing, and logistics departments. Sophisticated computer models, trend analysis, sales force estimates, or other methods can help develop such forecasts.

6. Traffic and Transportation

One major component of the logistics process is the movement or flow of goods from point-of-origin to point-of-consumption — and perhaps their return as well. Traffic and transportation refer to managing the movement of products and include activities such as selecting the method of shipment (air, rail, water, pipeline, truck); choosing the specific path (routing); complying with regional and national transportation regulations.

7. Warehousing and Storage

Products must be stored at the plant or in the field for later sale and consumption unless consumers need them the instant they are produced. Generally, the greater the time lags between production and consumption, the larger the level of inventory required.⁽⁷⁾ Warehousing and storage are activities that manage the goods stored in the warehouse, usually including quantity management and structure management. Specific storage activities include: decisions as to whether the storage facility should be self-built, leased, or rented; warehousing layout and design; product mix consideration; safety and maintenance; security systems; personnel training; and productivity measurement.

8. Warehouse Site Selection

Whether facilities are self-built, leased, or rented, the location of warehouses (storage facilities) is extremely important. The strategic placement of warehouses near the company's markets can improve the firm's customer service level. Proper facility location can also allow lower volume-related transportation rates in moving product from plant to warehouse, plant to plant, or warehouse to customer.

The first consideration in selecting a site is the location of the firm's various markets. The needs of the customers and the location of raw materials, component parts and subassemblies are also major considerations, for the company must be concerned with inbound movements and storage of materials in addition to outbound flows.⁽⁸⁾ Other important factors include:

labor rates; transportation services; city, county, and state taxes; security; legal concerns; local factors, such as the attitude of the community toward new industry; land cost; and availability of utilities.

9. Material Handling

Material handling is concerned with every aspect of the movement or flow of raw materials, in-process inventory, and finished goods within a plant or warehouse. The objectives of material handling are:

- (1) To eliminate handling wherever possible;
- (2) To minimize travel distance;
- (3) To minimize goods in process;
- (4) To provide uniform flow free of bottlenecks; and
- (5) To minimize losses from wasting, breaking, spoiling and thieving.

Certain costs incur every time an item is handled. Since handling generally adds no value to a product, these operations should be kept to a minimum. For items with low unit value, the proportion of material handling costs to total product costs can be significant. Poor material handling can lead directly to lost or damaged products, customer dissatisfaction, production delays, and idle employees and equipment. Material handling plays a vital role in reducing inventory, lowering costs, and increasing productivity.

10. Procurement

Every company relies to some extent on materials and services supplied by other firms.

Procurement is the acquisition of material and services to ensure the operating effectiveness of the firm's manufacturing and logistics processes. The procurement function includes the selection of supply source locations, determination of the form in which the material is to be acquired, timing of purchases, price determination, quality control, and many other activities. The changing economic environment of recent years, marked by wide variations in availability and cost of materials, has made procurement even more important in the logistics process.⁽⁹⁾

11. Parts and Service Support

In addition to the movement of raw materials, in-process inventory,

and finished goods, logistics must be concerned with many activities involved in repair and servicing of products. Logistics' responsibility does not end when the product is delivered to the customer. Part of the firm's marketing activity is to provide the customer with service after the sale. This involves providing replacement parts when products break down or malfunction. Automobile dealerships, for example, must have efficient service departments that offer complete servicing and auto repair. Adequate suppliers of spare and replacement parts are vital to the service and repair activity — and logistics is responsible for making sure those parts are available when and where the customer needs them. In the industrial marketplace, where the product may be a piece of manufacturing equipment, downtime can be extremely costly to the customer if product failure results in a production-line slowdown or shutdown. The firm supplying the spare or replacement parts must be able to respond quickly and decisively.

12. Packaging

Packaging performs two basic functions — marketing and logistics. In a marketing sense the package acts as a form of promotion or advertising. Its size, weight, color, and printed information attract customers and convey knowledge about the product. From a logistics perspective, packaging serves a dual role. First, the package protects the product from damage while it is being stored or transported. Second, packaging can make it easier to store and move products by reducing handling and thereby material handling costs. When firms are involved in international marketing, packaging becomes even more important. Products marketed in foreign countries travel greater distances and undergo more handling operations. In general, domestic packaging is not strong enough to withstand the rigors of export shipment. Specially, in many countries, management must deal with a lack of adequate material handling equipment and must rely on poorly trained personnel.

13. Salvage and Scrap Disposal

One by-product of the manufacturing and logistics process is waste material. If this material cannot be used to produce other products, it must

be disposed of in some manner. Whatever the by-product — scrap, residue, or radioactive waste — the logistics process must effectively and efficiently handle, transport, and store it. If the by-products are reusable or recyclable, logistics administers their transportation to re-manufacturing or reprocessing locations.

14. Return Goods Handling

The handling of return goods, often referred to as reverse distribution or backward logistics, is an important part of the logistics process. Buyers may return items to the seller due to product defects, out of date, incorrect items received, or other reasons. Reverse distribution has been likened to going the wrong way on a one-way street because the great majority of product shipments flow in one direction. Most logistics systems are ill-equipped to handle product movement in a reverse channel.⁽¹⁰⁾ In many industries in which consumers return products for warranty repair, replacement, or recycling, reverse distribution costs may be high. The cost of moving a product back through the system from the consumer to producer may be as much as nine times the cost of moving the same product from producer to consumer. Often the returned goods cannot be transported, stored, and/or handled as easily, resulting in higher logistics costs. Reverse distribution promises to become even more important as customers demand more flexible and lenient return policies.



New Words and Terms

consumption [kən'sʌmpʃən]	n.	消费, 消费量
warehousing ['weəhaʊzɪŋ]	n.	仓储, 仓库贮存
procurement [prə'kjuəmənt]	n.	采办; 取得, 获得
implement ['ɪmplɪmənt]	v.	实现, 完成, 履行; 执行
multitude ['mʌltɪtju:d]	n.	多数, 群众, 大批
intermediate [ˌɪntə'mɪdiət]	a.	中间的
differential [ˌdɪfə'renʃəl]	a.	有区别的, 基于差别的
integrate ['ɪntɪɡreɪt]	v.	连接成整体, 使完全; 使一体化
optimum ['ɒptɪməm]	a.	最佳的, 最适宜的, 最有力的