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**CARGO DELIVERY SYSTEMS – STRUCTURE AND FORMING
СИСТЕМА ДОСТАВКИ – СТРУКТУРА И ПРОЦЕСС ФОРМИРОВАНИЯ****Onyshchenko S.P.***d.e.s., prof.*

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Annotation. *The cargo delivery system is considered in the article as an ordered set of elements of transport systems (means of transport, infrastructure, communications) and intermediary enterprises operating in the transport services market (carriers, port forwarding agents, stevedoring companies etc). To form a delivery system actually means to select and include in it certain elements of each of these systems. Forming of the delivery system is carried out by the buyer or seller of the goods, depending on the tradeterms of the purchase contract. The process of forming the delivery system itself is presented in the form of an input-process-output model.*

Key words: *cargo delivery systems, transport system, transport services market, tradeterms.*

Introduction.

To realize a trade deal, it is necessary to move the goods from the seller to the buyer, or, in a wider section, from the producer to the consumer. The transport sector is therefore inextricably linked with the trading system, since without the participation of transport it is impossible to implement a trade contract. Thus, the same object becomes an element of two completely different in its essence, but closely interrelated systems - trade and transport. The trading system “initiates” the need to move goods, the transport system ensures this movement. One can find the term “cargo delivery system” which used in transport problem researches but usually without the clear definition of its sense, elements, principles of forming – just as already existing one.

Basic text.

The description of the term of “cargo delivery system” from the standpoint of a system approach involves among other items the identification of its structure, interrelationships of elements, the definition of the main function of the system. Delivery of goods is characterized by a certain set of elements of transport systems (the participation of one or several modes of transport, which together with the work of the infrastructure elements of transport systems, ensures the movement of goods through transport communications [1, 2]). At the same time the transport system itself cannot be considered as a delivery system, since the actual functioning of the elements of the latter begins from the moment of the arising the necessity to deliver a specific consignment of goods (the conclusion a purchase contract). So, the starting point for the formation of the delivery system is the goods and the need to move it. Participation in the delivery of certain vehicles and infrastructure facilities, which are determined by the technology of movement of goods, determine the presence of “technical and technological” subsystem in the cargo delivery system. Its main



elements are selected and included in the delivery system elements of the transport system.

Delivery of goods from foreign trade is carried out on the international market of transport services with the direct participation of the subjects of this market – carriers of different modes of transport (owning or operating appropriate vehicles), organizations performing loading and discharging operations and providing other necessary services to cargo at handling points, as well as various intermediary enterprises. So when considering delivery as a set of elements of the transport system, the interconnection, interdependence and interdependence of the existence and functioning of the elements of the transport system included with the delivery system with elements of the transport services market is important. Transport products are sold on this market, and the functioning of its elements is provided by direct participants in this market. Thus, delivery as a system is characterized by the presence of an “organizational and managerial” subsystem, whose elements are the subjects of the transport services market. Their number in the delivery system depends on the complexity of the system being formed - the number of elements included in it and the interrelations between them.

Thus, the delivery of goods as a system is a set of interrelated elements of the transport system and participants of the transport services market, the interaction of which ensures the achievement of a common goal - the movement of cargo from the point of its production to the points of its destination.

The choice of certain elements of the transport system and the subjects of the transport services market in order to form a cargo delivery system is carried out by the person who is responsible and liable for the delivery of goods (exporters and importers or structures specializing in such services (usually freight forwarding companies acting on behalf of and on behalf of the owners of goods). In accordance with the terms of the purchase contracts, the seller’s responsibility and obligations for organizing the delivery are limited to a certain stage of transportation, after which further transportation is the seller’s responsibility and obligations. Thus, each of them forms the delivery system only partially, in accordance with the terms of delivery of the goods. The delivery system formed by the seller to a certain point ceases to function, after which the cargo continue to move through the system already formed by the buyer. To illustrate this it is presented fig. 1 below. We put here three tradeterms (according to Incoterms 2010), applying in contracts with the necessity of maritime transportation. So if a contract concluded on FAS in means that the seller is responsible for organizing the cargo delivery system just to the indicated point (port B). So, his forming of system delivery means the decision what mode of inland transport to prefer and what carrier to choose. At port B the created by him system is stopped – when the cargo reached port B. From port B the cargo begins to move through the system created by buyer – vessels and carriers chosen by him, stevedores chosen by him etc. The similar situation is with other indicated tradeterms: on FOB-contract seller forms the delivery system choosing the inland transport and carriers, stevedoring and port forwarding agent in port B, but this system cuts at the moment of finishing the loading. The further cargo system delivery (carriage by sea vessel and carrier, discharging by stevedoring company, cargo services from port forwarding



agent in port C) is to be formed by buyer.

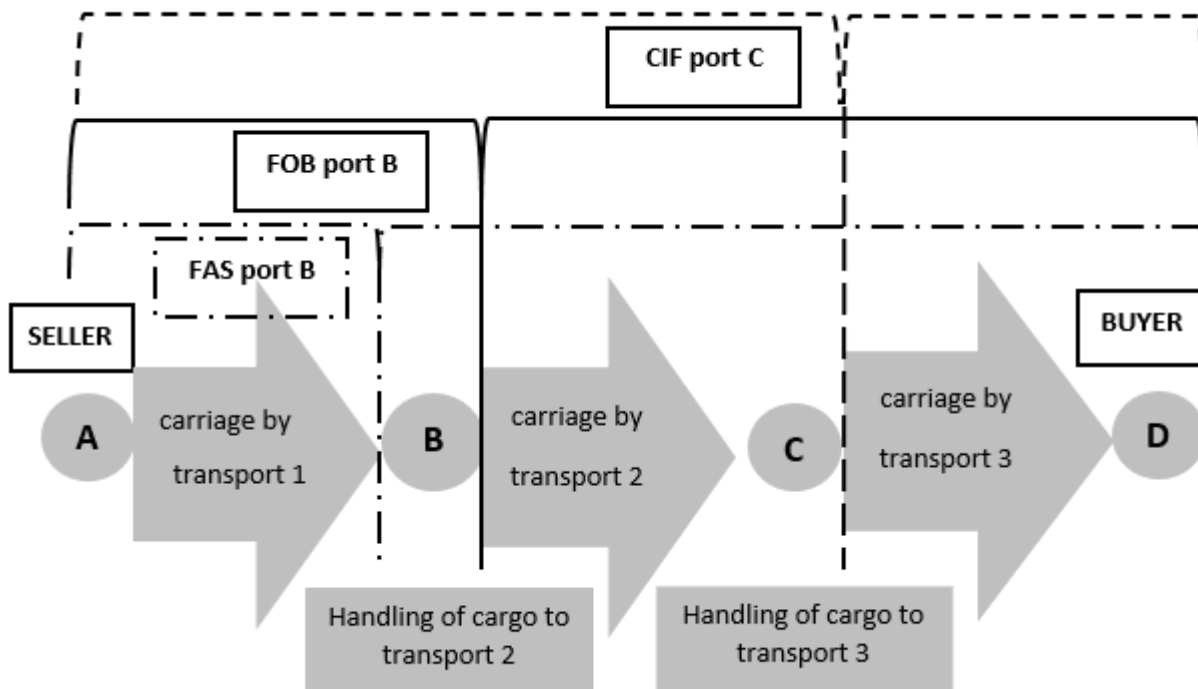


Fig. 1. Responsibility of seller and buyer to organize the cargo system delivery under different terms

The important item is that the system of delivery of bulk cargoes is not constant in the sense that the composition of the elements included in the system is characterized by a high degree of interchangeability of vehicles, infrastructure elements and the technologies used. At the same time, cargo (goods) can be transported by different types of transport on the same section; the transfer of goods from one mode of transport to another can be carried out at various point. Similarly, a significant number of subjects in the transport services market, potentially possible for inclusion in the delivery system, provide interchangeable services. So, the number of cargo delivery system options is determined by the number of possible combinations of elements of the transport system and the subjects of the transport services market that are involved in the operation of the delivery system.

In accordance with the system approach, the process of forming the delivery system can be represented as an input-process-output model. The input data are the goods as an object of the contract of sale and the specific terms of its movement as a cargo; the process itself is the formation of a delivery system, the output of which is the fact that the delivery system was formed, which is confirmed by the agreements concluded with the participants of delivery that ensure the functioning of the elements of the transport system and the subjects of the transport services market included in the delivery system (fig. 2).

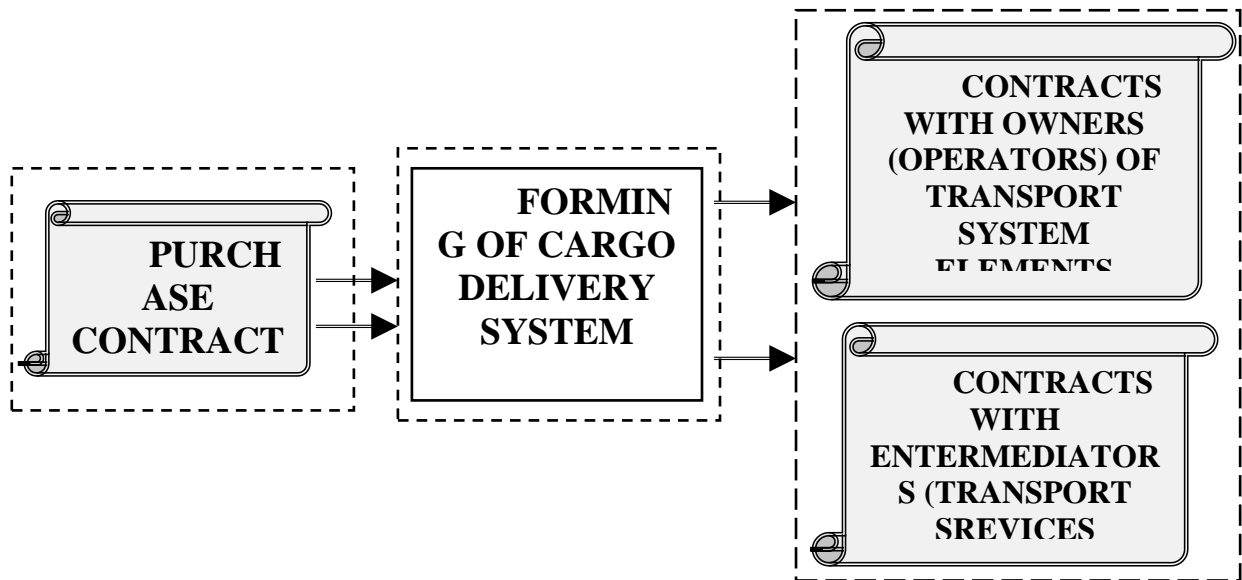


Fig. 2. Forming of cargo delivery system

Conclusions.

Cargo delivery system consists of elements of the transport system and enterprises of the transport services market, which are actually elements of the delivery system. The relationship and interaction between the elements of the delivery system are manifested in the coherence and coordination of their functioning.

The elements of the delivery system, in turn, make it possible to distinguish its technical and technological subsystem (the functioning of which ensures the physical movement of goods) and the organizational and managerial subsystem (commercial delivery support). In each of the subsystems (as well as in the delivery system as a whole), the elements included in it are ordered in a certain way and function to achieve the common goal of delivering cargo in accordance with the required conditions, while the individual elements of the delivery system cannot realize the function of the entire system. Forming of the cargo delivery system essentially means the selection of elements of the transport system and the market of transport services for organizing and ensuring the movement of goods. Each of the party of the trade contract forms the cargo delivery system to the point, where his obligation for transportations starts and ends and it depends on the tradeterms stipulated in the contract.

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Анотація. У статті розглядається система доставки вантажів як сукупність елементів транспортних систем (транспортних засобів, інфраструктури, шляхи комунікацій між ними – не враховуючи їх належність та підпорядкованість, адже у роботі вони розглядаються суто як фізичні об'єкти) та посередницьких підприємств, що діють на ринку транспортних послуг (перевізники, портові експедитори, суднові агенти, фрахтові брокери, стивідори, діяльність яких організує, сприяє, координує функціонування елементів транспортної системи). Сформуванню системи доставки фактично означає вибрати і включити певні елементи кожної з цих систем. Формування системи доставки здійснюється покупцем або продавцем товару, залежно від умов поставки товару за договору купівлі-продажу, згідно до яких продавець є відповідальним за доставку товару до певного географічного пункту, після чого така відповідальність переходить до покупця. Відповідно, кожен з них формує систему доставки лише у межах своєї відповідальності, обираючи транспортні засоби, інфраструктурні об'єкти транспорту, та компанії-учасники ринку транспортних послуг. Власне процес формування системи доставки представлений у роботі у вигляді моделі вводу-виводу-процесу.

Ключові слова: система доставки вантажу, транспортна система, ринок транспортних послуг, умови поставки.