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The Technologies of Cargo Shipment by Water Transport

The increasing volume of global transportation and appearance of new types and transport features of cargo raises the need for serious scientific studies. Studies of technology for cargo shipment by water transport cover the following issues: classification, regulatory framework and characteristics of cargo transportation technologies; responsibilities of a forwarder and a carrier for safety and security of the cargo; regulation of cargo heat exchange to the environment; shipment of tap, bulk, timber, general, food, dangerous cargo; shipment of heavy and large scale cargo, movable equipment. These issues are related to cargo loading, safe and secure cargo shipment and cargo unloading. Also, of significant importance is the knowledge of the characteristics and features of a cargo, of atmospheric phenomena, of the difference between the two categories, goods and cargo. An important issue in cargo shipment technology is defining the optimal way of loading. It's also necessary to know the cargo capacity for a certain route in order to define the suitability of the vessel and find out the usage of vessel's technical facilities to ensure the safety of the cargo, setting legally grounded commercial relations with customers. Very important are issues of establishing the security of freight shipping technology.

Keywords: *technology of cargo shipment, water transport, cargo, cargo capacity.*

Technology is a sphere which constantly use the results of different types of scientific studies (even significantly different from each other) according to the needs of society. Technology is defined as a system which "represents the unity of actions, procedures, operations implemented on certain objects, elements, materials, energy and information; it depends on certain principles, concepts, approaches, methods, rules; requires certain skills, knowledge, techniques, methods, tools, resources; is characterized by integrity, conceptual role, separation, structure, internal interaction, interaction with outside world, synchronization, measurability, ability to realize; is under control, evaluation, adjustment, coordination, rationalization; leading to some goals, solving certain tasks.

In view of this definition, technology of cargo shipment by water transport is a field of studies, which covers all the issues, procedures and sequence involved in the operation of maritime transport (Fig. 1).

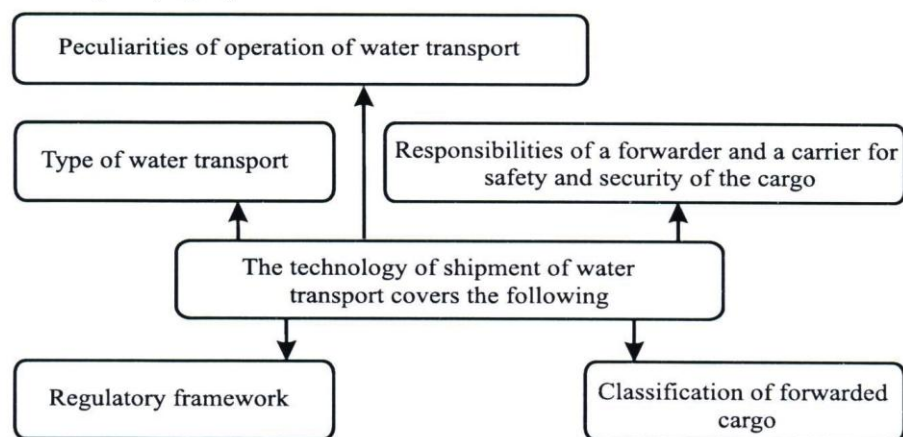


Figure 1. Technology of cargo shipment by water transport as a field of studies

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The following issues are covered by studies of technology of cargo shipment by water transport [1; 2]:

- ◇ classification, regulatory framework and characteristics of cargo transportation technologies;
- ◇ responsibilities of a forwarder and a carrier for safety and security of the cargo;
- ◇ regulation of cargo heat exchange to the environment;
- ◇ shipment of tap, bulk, timber, general, food, dangerous cargo;
- ◇ shipment of heavy and large scale cargo, movable equipment.

All above mentioned issues are related to cargo loading, safe and secure shipment and cargo unloading.

Obviously, it's of significant importance to know the characteristics and features of the cargo, but we got more thorough knowledge in this respect in the practice of Maritime transportation. This is due to the fact that the cargo, which still reveals unfamiliar features during transportation in connection with environmental and other factors, is caused by uneven technologies of transportation.

That is why knowledge of these features helps to cargo lineup and optimal solution of delivery for every performance of navigation (for sailing/voyage).

A significant importance is paid to atmospheric phenomena, air circulation and establishing humidity regime for the heat, organizing work with cargo, etc.

We should know that the moment when the carrier is provided with certain goods for transportation, the status of the goods is changed and instead of being goods it's called a cargo. We do emphasize that these two categories – goods and cargo, as they are very different from each other by characteristics. It is to be understood that once “a good” become “a cargo”, it loses its commodity characteristics, such as consumer features. Thus, there is a necessity to study and record a cargo as a new category of goods. The combination of these characteristics is considered to be properties of the cargo, which sets necessary equipment and technology for loading and unloading, determine the optimal way of loading and conditions of its transportation.

An important point in cargo shipment technology is to define the optimal way of loading, where first step to be taken is to determine size-mass characteristics of the regime to be placed (kept) on the vessel, containers and packaging characteristics, physical and chemical features, as well as some commodity features.

Interestingly, there is an agreement in the post-soviet countries, according to which there is a single classification and tariff nomenclature for all types of transport, which confirms the class of cargo tariff and shipping cost. Obviously, this should be taken into account by the forwarder, which should be fixed in a contractual agreement.

In order to work out complex system for development technological shipment, as a rule cargo is divided into 5 types: general, bulk, tap, etc. [1].

It's necessary to know the cargo capacity for a certain route in order to define the suitability of the vessel, and to find out the usage of vessel's technical facilities to ensure the safety of the cargo. Besides, knowledge of cargo capacity is essential for setting legally grounded commercial relations with customers. e. g. considering only inadequate (or suspicious) transportation signs of cargo one could protect the interests of the carrier. It should be noted that the establishment of the freight shipping technology security issues are very important, as for the practical operational activities of the fleet, as well as for scientific research, in order to make shipping more secure and profitable.

Therefore, coming out of above mentioned we can conclude that the increase in the volume of global transportation and new appearance of new types and transport features of cargo we faced the acute need for serious scientific studies.

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Технології вантажних перевезень водним транспортом

Стаття містить огляд проблем, які потрібні вирішуватись у процесі досліджень технології вантажних перевезень водним транспортом. Ці проблеми стосуються класифікації вантажів, безпеки перевезення вантажів різних видів і розмірів, визначення характеристик вантажів, урахування атмосферних явищ і погодних умов при перевезеннях, оптимізації завантажувальних і розвантажувальних робіт, визначення габаритів вантажів в залежності від маршрутів для безпечного перевезення вантажів, нормативно-правового регулювання відносин між перевізниками, відправниками та одержувачами вантажів.

Ключові слова: *технологія вантажних перевезень, водний транспорт, вантаж, габарит вантажу.*

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Технологии грузовых перевозок водным транспортом

Статья содержит обзор проблем, требующих решения в процессе исследования технологии грузовых перевозок водным транспортом. Эти проблемы касаются классификации грузов, безопасности перевозки грузов разных видов и размеров, определения характеристик грузов, учета атмосферных явлений и погодных условий при перевозках, оптимизации погрузочных и разгрузочных работ, определения габаритов грузов в зависимости от маршрутов для безопасной перевозки грузов, нормативно-правового регулирования отношений между перевозчиками, отправителями и получателями грузов.

Ключевые слова: *технология грузовых перевозок, водный транспорт, груз, габарит груза.*

