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Container transportation in Ukraine

Container transportation - the modern, and the most economical type of cargo delivery from all used in the transcontinental message. Container shipping and container applications are especially effective when mixed or multimodal transport is required, as a result of significantly reducing the cost of transporting, storing and transshipment cargo.

A significant place in the total volume of container traffic in Ukraine is taken by container transport by sea.

For the delivery of goods using different types of ships: general cargo vessels, container vessels, RO-RO vessels (roll-on/roll-off), bulk carriers, tankers, liquefied gas and chemical carriers, heavy lift vessels, reefer vessels. Today, about 90% of non-bulk cargo worldwide is transported by container ships. Container ships now rival crude oil tankers and bulk carriers as the largest commercial seaborne vessels.

There are two types of container transportation methods which can be used, Less than Container Load (LCL) and Full Container Load (FCL). [1]

- FCL refers to a single container booked by a shipper to transport their cargo (exclusively). This service is commonly used by shippers who have enough cargo to fill the whole container making it cost effective to book an FCL shipment.

- LCL refers to cargoes owned by different shippers, grouped in a single container by the forwarding agent, allowing transportation of smaller volumes of cargo without paying for a full container; this is more cost effective for smaller shipments which cannot utilize a full container.

In the carriage between countries a significant place is occupied by container road carriage. Delivery of goods between countries includes the choice of the route and the necessary transport.

International container transportation is organized between enterprises, railway stations, ports and consignees of cargoes, between sales and distribution centers.

The composition of the goods determines the choice of the transport company and the mode of transport. International container transportations are convenient because containers are adapted for transportation by all kinds of transport which considerably facilitates a task at mixed transportations.

The type of transport affects the costs associated with freight. They can be carried out by rail, road, water, air, as well as by various modes of transport, which are changing each other on the way.

The cost of freight also depends on the number of goods transported, and on the frequency with which they are carried out.

Advantages and disadvantages of container transportation services:

Advantages:

- low, in comparison with the alternative, the cost of transportation;
- possibility of transportation of large volumes of cargoes;
- possibility of storage of goods in containers without warehouses;
- compliance with the terms of delivery of modular cargoes;

Disadvantages:

- the speed of transportation is substantially limited, and, moreover, is directly related to the schedule of departure of ships from the port;
- limited number of container types for cargo transportation;
- rigid attachment to weather conditions, as well as to the port capacity.

Container transportation is a guarantee of cargo safety at a certain temperature and mode of the required humidity throughout the way of cargo movement.

Cargo carriers use universal containers for the carriage of main cargoes, for some cargoes they use specialized containers.

Most common containers are used: 20-foot containers and 40-foot containers. They carry artificial goods of a wide range of items, large cargo units and small-scale loads without packaging in a package or in a lightweight container.

In the foot containers of this type carry: household moving goods, industrial and food products. The list of such cargoes and conditions of carriage in containers of this type are provided by the relevant rules of carriage.

All containers have a lot of differences and criteria's, according to what they are divided into 7 types [2]:

1) Standard container:

As we know, there are 20-foot containers and 40-foot containers. Both of them need to have a common weight for transporting general cargo. For 20-foot it is 21,7 tons of cargo, for 40-foot-26,58 t.

2) High Cube container:

Now it is only the 40-foot container that has a height of 2,9 meters.

3) Flat Rack/Platform:

This container has only the front and back walls which affords it to transport huge cargo that weights up to 39 t.

4) Open Top:

It has a strong sheet instead of a roof. This helps to transport high cargo that is over 2,4 meters or that has to be ventilated.

5) Tanktainer:

This type of containers is used for liquids or fuel.

6) Reefer:

This is for a cargo that needs to be at the direct temperature. This container has a cooling mechanism that can VARIIROVATSA from -20 C to +20 C.

7) 45-foot container:

It has a capacity 83 meters' cube and it can transport cargo that is 27,9 tons.

Due to the different types of containers, today container shipments of goods of any dimensions are possible, as well as goods that need low temperature during transportation. The characteristics of different container types are given in the table 1. [3]

Table 1.

Characteristics of different container types

	Maximum gross	Container	Maximum load	Cargo Capacity (Volume)	Doors (w / a)
20' standard	52910 lbs = 24000 kg	4585 lbs = 2080 kg	48325 lbs = 21920 kg	1197.25 cub. ft. = 33.9 cub. m	7' 8" = 2335 / 7' 6.25" = 2292
40' standard	67200 lbs = 30480 kg	8600 lbs = 3900 kg	58600 lbs = 26580 kg	2392 cub. ft. = 67.7 cub. m	7' 8.25" = 2343 / 7' 5.75" = 2280
20' refer	27000 kg	3050 kg	23950 kg	28.0 cub. m	2237 / 2260
40' refer	67200 lbs = 30480 kg	4370 kg	26110 kg	60.2 cub. m	2285 / 2245
20' Open Top	52910 lbs = 24000 kg	5380 lbs = 2440 kg	47520 lbs = 21560 kg	1133 cub. ft. = 32 cub. m	7' 7.9" = 2335 / 7' 4.1" = 2240
40' Open Top	79370 lbs = 36000 kg	9760 lbs = 4430 kg	69600 lbs = 31570 kg	2355 cub. ft. = 66.7 cub. m	7' 8" = 2338 / 7' 3.8" = 2234
20' Flatracks	66140 lbs = 30480 kg	6500 lbs = 2950 kg	60690 lbs = 27530 kg	986 cub. ft. = 27.9 cub. m	
40' Flatracks	88180 lbs = 45000 kg	12190 lbs = 5530 kg	87,020 lbs = 39470 kg	1936 cub. ft. = 54.8 cub. m	
40'refer Highcube	67200 lbs = 30480 kg	4200 kg	26280 kg	67.4 cub. m	2286 mm / 2478 mm

At the end of 2018, the seaports of Ukraine handled 846.5 thousand TEU (twenty-foot equivalent units) of container cargo [4]. This is 18.7% more than in 2017. In 2018, the export and import of containers through the Ukrainian seaports was distributed almost equally - 47.4% and 48.8%, respectively. The structure of export by containers is the follow: grain, fruits, foodstuffs, as well as metal products, construction materials. Imported mainly equipment, textiles, foodstuffs, alcohol, plastic. The leaders in container handling were the ports of Odessa, Yuzhny and Chernomorsk.

The volume of container traffic by rail is also increasing [5]. And over the past nine years, as well as the turnover of containers in ports, hit records. According to Ukrzaliznyca, 334,963 TEU were transported in 2018, which is 13% more than in 2017. As part of container trains, which already runs 17 on a regular basis, including 7 transit trains, 95,700 TEU were transported last year. The increase occurred in all types of communication: transit grew by 24%, exports - by 17%, domestic transportation - by 11% and imports - by 8%.

Talking about transportation of cargo by trucks it's could be defined that container freight transport in Ukraine is the most reliable way of transportation, that reduces costs of shipping. The essence of container shipping is to use specially equipped vehicles to deliver goods, baggage and other material values from the shipper to the consignee.

In Ukraine, as in other countries, the first step in transportation by car is to verify all the activities, which consist in assessing the technical condition of the vehicle and the cargo platform. This helps with the security and safety of cargo transportation because this way of shipping needs to be reliable for customers.

The next step is to analyze if there are no unsafe or forbidden products inside the car of cargo. There is the list of things that should be deleted from the car:

- perishable cargo;
- flammable, explosive and toxic cargo;
- cargo that pollutes the transport structure;

- entering into a chemical reaction with metals cargo.

The law provides for road container transportation in the country with the use of universal and special containers. The first type is used to transport items that are in lightweight packaging, the second -for cargoes to which individual conditions of movement are imposed.

Within each container must be descriptive documentation with the signature and seal of the shipper. All these steps show that container shipments can afford save transportation that is un the priority of customers.

Conclusion

As we can see, transportation of containers plays a big role in Ukraine, it has a lot of different types of cargo, containers and transport to ship it to the customer. It is important to understand as a logistician what you can use to deliver your goods, what is save and how to do it correctly, without any losses. The most developed way of transportation is maritime transports and trucks. Both of them usually come from Odessa because it is one of the cities that focuses on shipping cargo inside or outside Ukraine.

To sum up, container transportation still can develop even bigger in Ukraine and become more economical and official for logistics companies. Also, it should be open for people that are not working in logistics companies as the way of personal use in transportation goods.

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