УДК 656.025.4

ПУЛИНГ ПАЛЛЕТ В ЦЕПИ ПОСТАВОК
PALLET POOLING IN THE SUPPLY CHAIN

Прокопович В.Н., Трацевская А.А.
Научный руководитель – Павлова В.В., к.э.н., доцент
Белорусский национальный технический университет,
г. Минск, Беларусь
valeria567523@gmail.com
V. Prokopovich, A. Tratsevskaya
Supervisor – Pavlova V., Associate Professor, PhD in Economy
Belarusian national technical university, Minsk, Belarus

Аннотация. В статье рассмотрены вопросы трансформации цепи поставок, путем перехода к системе по управлению многооборотной тарой с замкнутым циклом – пулингу паллет.

Abstract. This article discusses the issues of transformation of the supply chain by switching to a system for managing reusable tare with a closed cycle – pallet pooling.

Ключевые слова: пулинг, тара, паллета, компания-пулер.

Key words: pooling, tare, pallet, pooler-company.

Introduction.

In the modern world, sustainable business development is more than a trend. It is a tool for companies to compete. In recent years, cyclical economy models have become especially relevant, which work through the effective use of resources already involved in turnover. This allows you to reduce the burden on the environment and save the resources of the planet.

Experts note the increasing demand of society for sustainable development – more than 70% of consumers pay attention to the environmental friendliness of the product when buying. Such a request encourages companies to look for more effective approaches to doing business. As a result, circular models (closed-loop models) are becoming more and more in demand. They not only reduce the environmental burden, but also increase the competitiveness of business [1]. A striking example of a closed-loop economy is pallet pooling – multiple sharing of transport tare.

The main part.

Pooling is a tare turnover system in which the customer takes a pallet for use, and does not buy it. In general, the pooling system is close to the carsharing system of cars. When renting a car, the client must return the transport to the pick-up point, and the carsharing service allows you to leave the car in a location convenient for the client, where the user's responsibility ends. Thus, the client uses the tare while he needs it – places goods on it and sends it to the counterparty. Everything that happens to the pallet after it is sent to its destination is the care of the pooler-company.

Differences between pooling and renting:

– pallets from the pooling are marked or painted for the convenience of maintaining the balance of the turnover container;

– to confirm the shipment of pallets, the counterparty must withdraw the tare from the cost of the goods and mark it in the invoice, this is the end of the supplier's area of responsibility [2].

One of the largest operators of tare pooling and a pioneer of the cyclical economy is the Australian company CHEP, part of the Brambles group of companies. At the end of 2019, the company took first place in the Barron's magazine sustainability rating and second place in the Dow Jones Sustainable Index 2020 in the category of commercial services and supplies.

In 2015 CHEP announced the implementation of an ambitious program «Sustainable Development Goals for the period up to 2020», and now its results have been summed up. The company has achieved the goals in all areas announced five years ago. It has managed not only to significantly reduce its own ecological footprint, but also to mitigate the negative impact of supply chains on the environment as a whole.

In five years, within the framework of the sustainable development strategy, CHEP has completely switched to the purchase of wood for the repair and renewal of pallets from farms that adhere to the principles of sustainable forest management. Thus, it prevented deforestation and had a positive impact on the local population and local flora and fauna. It has also increased the share of renewable energy sources to 70% and reduced its carbon footprint by 33%.

Pooling has also made global supply chains more sustainable. In five years, the formation of waste in them has decreased by 5,8 million tons due to the repeated use of transport packaging.

In addition, pooling optimized the use of transport and thereby reduced the empty mileage of cars. Through the joint efforts of pooling companies, carbon dioxide emissions in supply chains decreased by 10,3 million tons [3].

The pooling of reusable tare is rapidly replacing the traditional approach – the purchase and «one-time» use of the same wooden pallets. In the new model, the pooler-company provides pallets to manufacturers for rent for the delivery of goods to retail chains.

There is no need to return the tare, after sending it with the goods to the network or to distribution centers, the pooler-company takes the vacated pallets on its own. To collect pallets, the company enters into an agreement with retailers and distributors, according to which it has the right to pick up empty pallets if the packaging is not included in the price of the product. They often provide the company with services for sorting pallets and storing them at their distribution center. When a sufficient number of empty pallets have accumulated in the warehouse, the pooler-company takes them to the service center for inspection and repair, and then returns them to circulation again. As a result, one pooling pallet is in circulation 10 times longer than the usual one.

In a broad sense, the pallet turnover cycle is the time from sending the tare to the customer until it is returned to the service center of the pooler-company for inspection and maintenance. For the company's clients, the pallet cycle begins from the moment the tare is delivered to the warehouse or production facility until notification of the shipment of the pallets to the counterparty.

The main savings in the transition to the pooling system are achieved by reducing administrative and operational costs: there is no need to keep a stock of pallets in stock, deal with their storage, inspection, repair, return from retailers. The delta between the cost of using own pallets and the turnover is from 17% to 30% [4]. At the same time, the final cost of services for each company is calculated individually, as well as the feasibility of switching to this system.

Conclusion.

Pallet pooling leads to lower loads for all participants in the supply chain. Each of the participants focuses on their main tasks: the manufacturer – on the manufacture and promotion of their products, the puller-company – on the management of pallets [5].

The manufacturer gets rid of the problems associated with the return of pallets, sorting and repair, accounting and numerous balances with its counterparties. In addition, he always has the necessary number of high-quality pallets for the optimal functioning of the enterprise.

In addition, the transition to pooling models ensures the fulfillment of a number of ESG strategy goals set by many responsible companies [1]. Firstly, the use of reusable tare reduces the burden on the environment by preserving natural resources (wood) and reducing the carbon footprint. Secondly, pooling increases the transparency of supply chains, ensuring more effective interaction of their participants.

Thus, the main advantages of introducing pallet pooling services into the business include:

– freeing warehouses from unused pallets and pallet scrap;

– saving money related to transportation costs and repair of pallets, as well as due to the use of reusable tare;

– contribution to environmental protection and conservation of natural resources through the repeated use of wooden tare.

References

1. Sustainable supply chains: the transition to efficient and environmentally friendly models [electronic resource]. Access mode: https://www.retail.ru/rbc/pressreleases/nedelya-riteyla-prodovolstvennyy-riteyl-ili-spetsializirovannye-seti-kak-budet-razvivatsya-vinotorgo/. Access date: 20.10.2022.

2. Puling of pallets [electronic resource]. Access mode: https://baza-tara.ru/puling/. Access date: 20.10.2022.

3. How reusable tare increases business sustainability [electronic resource]. Access mode: https://platform.plus-one.ru/news/2020/12/03/kak-mnogorazovoe-ispolzovanie-tary-povyshaet-ustoichivost-biznesa/. Access date: 20.10.2022.

4. Puling pallet: 11 questions and answers [electronic resource]. Access mode: https://www.retail.ru/articles/puling-pallet-11-voprosov-i-otvetov//. Access date: 20.10.2022.

5. Barancheev, V.P. Innovation management: textbook / V.P. Barancheev, O.I. Ganchenko, E.V. Petrova. – M.: Yurayt, 2015. – 388 p.

Submitted on 20.10.2022