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RESOURCE-SAVING TECHNOLOGIES IN THE TRANSPORT LOGISTICS COMPLEX

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ANNOTATION:

this article is devoted to the issues of the introduction of resource-saving technologies in the complex of Transport Logistics. It analyzes the concept of resource conservation and its importance in the logistic system. Areas such as efficient use of vehicles, optimization of roads and routes, automation of warehouses are considered. It will also highlight the contribution of modern technologies, including electrotransport, autonomous vehicles, and blockchain technologies, contributing to resource savings.

Introduction. Transport Logistics is an integral part of the modern economy. Ensuring timely and affordable delivery of goods from production to the place of consumption is the main task of the transport system. At the same time, saving resources is one of the important issues today. This ensures increased economic efficiency, reduced costs and alleviation of environmental problems. Logistic technologies should be understood as a set of similar logistic operations or actions in a direction designed to achieve a logistic goal, associated with the change and movement of material flow in a certain time frame and space. Logistics technologies are a series of regulated logistics processes. Combines logistics technology with technology and logistics operations. There are operations related to the direct conversion of raw materials, semi-finished products, etc.into a finished product or service. These operations are related to obtaining a material product and are called technological. There are also operations that are part of the technological processes of obtaining a product or service, which involve movement, transportation, warehousing, storage, expedition on the path of the flow of material to reach the final consumer. This article will be devoted to modern technologies for saving resources in the system of transport Logistics. Before we talk about the above modern technologies, we will analyze in the first place the concept of resource conservation and its place in logistics.Resource conservation is the process of

achieving the maximum result by minimizing energy, raw materials, time and other resources. In the system of Transport Logistics, this not only reduces costs, but also reduces environmental damage.For example, by reducing fuel consumption or choosing the right vehicles, the cost of goods becomes cheaper. Also, saving time makes operations in the logistics system more efficient. The essence of resource-saving technologies.Resource-saving technologies are a system of technologies that ensure the achievement of economic and environmental sustainability through the efficient use of energy, raw materials, water, and other natural resources. They are used in industry, transport, agriculture, construction and other areas of everyday life. Its main essence is primarily to reduce resource consumption. Resource-saving technologies reduce costs by minimizing fuel, electricity and raw material consumption.For example, the use of low-energy devices or recycled materials.It also provides environmental sustainability by protecting the environment,reducing emissions and reducing carbon footprint. Modern requirements for saving resources are considered especially relevant nowadays.Including; 1. Technological innovation: IoT (Internet of Things) devices - optimize the consumption of energy and materials using network sensors.Artificial intelligence is the reduction of resource surplus by analyzing data and increasing efficiency. 2. Energy efficiency: Transition to renewable energy sources (sun, wind, biomass).Application of low-energy devices and automated systems. 3. Circular Economy: Processing products and reuse of materials, reducing waste.Development of Zero-Waste Systems. 4. Compliance with environmental requirements: Environmental protection laws and compliance with international standards (e.g. ISO 14001).The use of environmentally friendly technologies in production. 5. Digitization and automation: Saving time and resources by optimizing work processes.In logistics and transportation, automated systems (such as autonomous transportation) reduce fuel and time consumption. Nowadays, a huge number of trends are going in the world, especially in this regard.Countries such as the European Union in particular are defining resource conservation as a central element of their economic strategies to achieve sustainable development.It is actively working on expanding green technologies and waste-free production models in China and the United States.Therefore, saving resources is not just an economic necessity, but an important condition for achieving sustainable development and global environmental security. Modern technologies and international cooperation play a decisive role in achieving these goals.

Conclusion: The introduction of resource-saving technologies in the Transport Logistics Complex not only increases economic efficiency, but also leads to significant improvements in environmental and operational aspects. Currently, resources, especially energy and time, have become the most important and valuable elements for each enterprise. Therefore, the need to apply innovative technologies aimed at saving resources in transport systems is increasing. These technologies help not only reduce costs, but also make transportation

processes more efficient and protect the environment. In general, the use of resource-saving technologies in the Transport Logistics Complex will increase competitiveness for companies, reduce costs and help reduce environmental impact. Through the introduction of technologies, it is possible to ensure effective management at all stages of the transport system and create an opportunity to save time, energy, material resources. This, in turn, makes it possible to ensure environmental safety and achieve new directions of sustainable development.

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