

**SYSTEMS FOR CONTROL OF GOODS MOVEMENT
IN INTERNATIONAL TRANSPORTATION**

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Trade between different countries is an integral part of the world economy. To ensure the efficient and safe movement of goods across borders, a stable and effective system for controlling the movement of goods in international transport is necessary.

The goods movement control system includes several stages, from customs clearance of cargo to its delivery to its destination. Each stage has its own characteristics and requires an appropriate approach. The first stage is customs clearance of the cargo. At this stage, documents are checked for compliance with the requirements of customs laws and regulations. The presence of prohibited goods in the cargo is also checked. Various methods are used for this, including X-rays, magnetic resonance imaging and other technologies. The second stage is cargo transportation. At this stage, goods are transported from the origin to the destination. To ensure safe and efficient transportation, various modes of transport are used such as automobiles, trains, ships and airplanes. The third stage is warehousing. Once the cargo arrives at its destination, it can be stored in a warehouse for further processing and distribution. Various methods are used to control warehouse storage, including video cameras and monitoring systems. The fourth stage is delivery of the goods to the final consumer. At this stage, the goods are delivered to the final consumer. Various methods are used to ensure safe and efficient delivery, including courier and postal services [1].

Product control systems in international transport are an important tool for ensuring the safety and efficiency of goods transportation. They allow you to track the movement of goods from the sender to the recipient, monitor their quality and condition, and also respond in a timely manner to possible problems.

One of the most common systems is the GPS tracking system. It allows you to determine the location of cargo in real time and receive information about its movement. GPS tracking allows you to accurately determine the location of your cargo in real time. To do this, it is necessary to install a special device with a GPS module on the cargo, which will transmit information about its movement via satellite communications. Data on the location of the cargo can be obtained via the Internet or a mobile application, where they will be displayed on the map as a point with coordinates. GPS not only provides vehicle location, but also enables the use of fleet management systems. Fleet managers can create geofences to notify them when vehicles pass certain locations. Fleet management systems also optimize route planning using real-time location data and help track driver schedules. Thus, GPS tracking helps monitor the route of cargo and respond promptly to possible problems or delays in delivery.

RFID (Radio Frequency Identification) is a technology that allows the use of radio frequency signals to identify objects: a method for automatically identifying objects, in which data stored in so-called transponders, or RFID tags, is read or written using radio signals. In international logistics, RFID is used to improve supply chain management processes and improve the efficiency of goods delivery. RFID tags can be installed at every stage of product delivery - from the warehouse to the final recipient. This allows you to control the movement of goods, track their condition and promptly respond to possible problems. For example, using RFID technology, you can track the movement of cargo in a warehouse, monitor its quality and condition, and determine the optimal delivery time. RFID can also be used to automate processes in warehouses, speed up the shipping process and reduce delivery time. Overall, RFID technology is an effective tool for supply chain management and improving the efficiency of goods delivery in international logistics [2].

Another important system is the electronic document management system. Electronic document management system (EDS) is a system (computer program, software, etc.) that allows you to organize and automate work throughout their entire life cycle. The main functionality of the EDMS should include the ability to create, modify, store and route documents, as well as a number of service capabilities, such as search, classification, etc. It allows you to automate the process of preparing documents for the transportation of goods, which speeds up the delivery

process and reduces the likelihood of errors. An electronic document management system (EDMS) in international logistics allows you to automate the process of information exchange between supply chain participants. It ensures fast and secure transfer of documents such as invoices, delivery notes, quality certificates, etc., and also speeds up the data processing process and reduces the likelihood of errors in information processing. Using the EDMS, you can monitor the status of cargo at every stage of its movement from sender to recipient. This increases the efficiency of the entire logistics system and reduces the costs of its operation. To do this, you must have access to the system and know the transaction number or cargo identification code. In the EDMS you can see information about the location of the cargo, its date of dispatch and delivery, as well as the condition of the packaging and labeling. All this data helps control the quality of services and make prompt decisions in case of problems or delays in cargo delivery [3].

The system for controlling the movement of goods in international transport is an integral part of the effective management of logistics processes. It allows you to timely track the movement of goods at all stages of delivery, minimize the risks of loss or damage to goods, and also improve the quality of customer service. Thanks to the use of a product distribution control system, it is possible to significantly reduce delivery time, improve the accuracy of forecasting demand for goods and optimize logistics costs. In addition, it should be noted that the product distribution control system must be flexible and adaptive to changing market conditions and customer needs. This is achieved through the use of modern technologies and tools [4].

References

1. Use of GPS in Logistics [Electronic resource] – Mode of access: <https://gpsbeam.com/gps-use-in-logistics/> – Date of access: 26.03.2024

2. Radio-frequency identification [Electronic resource] – Mode of access: https://en.wikipedia.org/wiki/Radio-frequency_identification – Date of access: 26.03.2024.

3. Electronic Document Management System (EDMS) [Electronic resource] – Mode of access: <https://helpjuice.com/blog/edms> – Date of access: 26.03.2024.

4. What is GPS in logistic? [Electronic resource] – Mode of access: <https://www.espeedpost.in/> – Date of access: 26.03.2024.