https://boxette.com/uk/dostavka-ostannoyi-myli-yak-skorotyty-mozhlyvi-ryzyky.

[2] Digital Consumer Survey 2020: Key Insights. URL:https://www.euromonitor.com/digital-consumer-survey-2020-key-insights/report.

[3] 6 головних трендів у логістиці e-commerce: чого чекати бізнесу. URL:https://logist.fm/publications/6-golovnih-trendiv-u-logistici-e-commerce-chogo-chekati-biznesu.

[4] Нові тенденції в логістиці останньої милі – logist.today. URL:https://logist.today/dnevnik_logista/2017-10-26/novye-tendencii-v-logistike-poslednej-mili.

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INCREASING THE EFFICIENCY OF PROCESSING INTERNATIONAL CARGO FLOWS IN THE CONDITIONS OF MULTIMODAL TRANSPORTATION

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The analysis of the functioning of the near-port railway node proved that today the growth of international freight flows by railways of Ukraine in the conditions of multimodal transportation is accompanied by a decrease in the processing capacity of the near-port stations. This leads to the need for significant capital investments both in the infrastructure of the stations, and in the introduction of advanced technologies for the operation of facilities involved in the processes of processing train traffic at the stations.

Based on the analysis of scientific works, it can be concluded that modern scientific works represent a set of progressive methods of interaction of different types of transport in transport hubs. But the dynamic development of the cargo transportation market to sea ports, the emergence of a significant number of private owners of rolling stock, the development of economic relations with other countries require a constant search for relevant solutions for the effective organization of international transportation both by rail transport and in its interaction with sea ports.

As a result of the study of the technological parameters of the port node, their average values and the degree of deviation were determined, the value of which makes it possible to conclude about the need to improve the technology of the work of both port stations and the railway node as a whole with the aim of more rational use of the available capacities of the stations, speeding up the delivery of goods to the cargo fronts of the station and port and increasing the efficiency of handling international wagons.

With the use of modified gravity models, an effective variant of the redistribution of sorting work for forming the supply of wagons destined for port moorings from port-side cargo stations to technical stations of the port node was determined. This allows not only more efficient use of available station capacities, but also the connection of objects in the system. The higher the degree of gravity in the system, the higher the quality of the technology implementation process in the port node.

The developed stochastic mathematical model for optimizing the loading level of shunting locomotives in the sorting station formation subsystem takes into account the probabilistic nature of the duration of the completion of wagon formation. The use of the model will ensure the reduction of non-productive stoppages of wagons at the stations of the port hub and will make it possible to eliminate the need for repeated processing of wagons at the port stations.

The evaluation of the economic efficiency of the proposed measures to improve the efficiency of work with international railcar traffic at port hubs showed that the value of the cumulative economic effect over the estimated period of five years will amount to almost UAH 1.78 million.

Thus, the result of the work carried out is an increase in the efficiency of processing international cargo flows in the conditions of multimodal transportation by redistributing the sorting work between the reference sorting station of the port node and port cargo stations, taking into account their technical capacities. The results of the work carried out are scientific and applied in nature and can be applied in port nodes of Ukraine.

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ЛОГІСТИЧНІ ТЕХНОЛОГІЇ В ГАЛУЗІ ТРАНСПОРТУ І ПРОМИСЛОВОСТІ

LOGISTICS TECHNOLOGIES IN TRANSPORT AND INDUSTRY

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Потужна, надійна й інтегрована в розвинуту мережу транспортна інфраструктура – це передумова мобільності промислових товарів і людей. Транспорт і мобільність є вирішальними факторами розвитку виробничих підприємств [1].

Логістичні технології в галузі транспорту і промисловості відіграють важливу роль у забезпеченні ефективного руху товарів, матеріалів і інформації через постачальницький ланцюг. Вони сприяють оптимізації процесів постачання, зберігання, транспортування та розподілу, що призводить до зниження витрат, підвищення швидкості та покращення