

The party which accomplishes transportation of a material flow is defined by the minimum logistical cost and ability to conduct it. We should mark that manufacturers, as a matter of fact, deliver their products on the territory of Belarus and the nearest regions of the Russian Federation.

In the summary of the research of the supply chain of chemical products the following aspects are shown:

- the rate of the material flow of chemical products is defined by a large chemical enterprise, which dictates its terms on the market;
- in the process of the motion of the material flow of chemical products there are organizations “bottlenecks”, which have the rate lower than the capacity of the flow, this factor leads to the loss of their productivity;
- the chemical enterprises in Vitebsk region are located in close proximity to each other, as they are suppliers and consumers of the chemical flow, so it helps to reduce logistical costs;
- the promotion of the material flow of chemical products is performed according to complex logistic schemes, however it tends to lead to minimization of intermediaries in its structure.

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THE AUTHOR'S METHOD OF THE ENSURING THE ECONOMIC SECURITY FOR THE SUPPLY CHAIN FUNCTIONING

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In the article it is determined that the economic security for the supply chains functioning in the long term comes from the necessity of constant enhancement of law-enforcement measures. It also reveals the necessity of constant supervision of the supply chain security through the state effort consolidation and private or public institutions on the basis of the standard ISO 28000 principles. The article contains the analysis and generalization of the researches on the theoretical approaches to supply chain management, which has allowed to develop the author's own methodology of the ensuring the economic security for the supply chain functioning.

The ensuring of the economic security for the supply chains functioning in the long term comes from the necessity of constant enhancement of law-enforcement measures to identify, prevent, intercept and disclose any encroachments on the property.

The application of the methodology for the ensuring the economic security for the supply chains functioning is especially actual in the developed countries, where there is an impressive industrial potential and high level of competition. For example, there exist many actively issued decrees, aimed at achieving the security of the society in the Russian Federation, including the economics, such as, the Decree of the Russian Federation President N537 from may the 12th, 2009 "National Security Strategy of the Russian Federation until 2020".

The situation is slightly different in the Republic of Belarus: there is not much competition between manufacturers, but still the country decrees, aiming at ensuring global security.

In the modern conditions fundamentally new relationship participants in the field of accessory cost creation are raised, chains and networks of the foodstuff deliveries are formed, as well as medical products and other things, which are all considered as separate systems, quality of which starts from raw production, finished products, transportation, consumption and up to recycling.

On the one hand there is a severe competition of manufacturers in the Republic of Belarus and as consequence, one can observe the insufficient efficiency of the ensuring the security of supply chains, while realizing the task "strategy of national security", and on the other hand, the organization (enterprise) should take measures to ensure security of their product more actively, owing to constantly changing market conditions.

In 2007, a new international standard on the security management of supply chains ISO 28000 was adopted, the use of its concept could strengthen the ensuring security of material flows. ISO 28001 discloses the best practice of concerning the security management of supply chains. In the modern conditions, when one can see the transition of the economy from the capitalization concept to the concept of stability, the conformation requirements of this standard for normal functioning of the organizations (enterprises) is extremely important. It is possible to say that the standard ISO 28000 is the integrating standard on management in the conditions of turbulent environment where the key purpose is stability [1].

Economics

The basic direction to the problem solving of the ensuring the security for supply chains is to consolidate the state efforts and private or public structures on the basis of ISO 28000 principles.

The Supply chain is a difficult object of management and demands all-round study of its conflict situations between the participant's interests, strategies, tactics, ensuring of security on the basis of the modern scientific concepts, new models, methods and international experience. The ensuring the security for supply chains should become one of the management tools.

It is necessary to notice that enterprises, importers and exporters of products, customs and freight brokers, carriers, operators of container terminals, railway stations, airports, sea and river ports, warehouse complexes, freight forwarders, distributors are specifically interested in having the certificate of management system security for supply chains ISO 28000:2007 [2, 3].

The international standard ISO 28000 was developed in reply to the requirement of the industry for the standard on security management. Its ultimate goal is to improve the security of supply chains. It is the management standard of the high level, that enables organizations to create a complete security management system of supply chain. In accordance with the requirements of the standard, the organization should estimate its working environment on the basis of the ensuring security, and it should also specify if the measures of the ensuring security are adequate and if special requirements to ensure the security of enterprise have already existed [2, 3].

Security management is connected with many other aspects of business management. These aspects include all types of activity and the system of balanced indicators which influence the security of the supply chain. All these elements should be considered from the direct place of the influence on security management, including transportation of these goods in the supply chain.

The international standard ISO 28000 can be applied to any enterprise, irrespective of its amount and type of activity, and if such an enterprise involves the supply chain in one way or another and wants to implement the system of security management, in order to ensure an adequate level of its security for the supply chain (or its parts).

The advantages that the organizations (enterprises) receive in the management systems should meet the following requirements of the international standard ISO 28000:2007 [3, 4, 5]:

- reduction of the number of security breaches, of the amount of damage from security breaches, of theft and smuggling on transport;
- realization of effective control and risk management in relation to the security threats, applicable to a type of activity;
- strengthening the image and reputation of the reliable partner in the market of the given goods (services);
- optimization of the expenses on the maintaining an adequate level of security for the supply chain (or its parts) due to the systematic usage of the internal resources, allocated for the security;
- alleviation in receiving the status of the requirement conformity of the security programs of different national customs organizations (for example, the status of the European authorized economic operator (AEO) or the partnership in the program C-TRAT);
- possibility to create the integrated management system, thanks to the exclusively high degree of harmonization of the standard ISO 28000 with standards ISO 9001 and ISO 14001 ;
- effective interaction with involved parties on security issues and their knowledge, including the choice activity in the contractor (the supplier).

The certification of the organization on requirements conformity of the international standard ISO 28000:2007 is consistent with the public authorities' actions, directed on realization of positions of the law "Transport security", which purpose is to ensure the security of transport infrastructure and vehicles objects.

Also, it is necessary to note the importance of carrying out the patent search for organizations (enterprises) which are aimed at producing new products, or having invented something new during their activity.

The patent researches are conducted:

- at development of scientific and technological long-term forecasts planning for science and technology;
- at application preparations for the product design and adoption;
- at creating objects for the technology (research and development);
- at exploration and production.

The purpose of the researches is to search and select objective data to ensure high technological level and competitiveness of technical objects, to use modern scientific and technological achievements and to except unjustified duplication of researches and developments.

Thus, the methodology of the ensuring economic security for supply chain functioning (Fig. 1) includes a number of related activities, such as partial or complete introduction to the organization (enterprise) the standards ISO 28000, ISO 9000 in practice, and others. The process of carrying out the patent research implies the subsequent actions.

Methodology of the ensuring the economic security for supply chains functioning
Partial or complete introduction to the organization (enterprise) the standards ISO 28000, ISO 9000 or other standards in practice
Conducting patent searches, if necessary, with all the ensuing follow-up actions (drawing up the patent for own invention, the industrial pattern, trade mark with the help of a specialist)
Monitoring the condition of industry (sphere) in which the organization (enterprise) operates, international practice in the field of ensuring the economic security for supply chains functioning
Increased level of technical equipment in the organization (enterprise), application of the licensed software products
Carrying out the activities that contribute to the best possible result in the field of ensuring the economic security for supply chains functioning (for example, lecture, seminars for suppliers, clients, personnel)

Fig. 1. Methodology of the ensuring the economic security for the supply chains functioning

Source: developed and compiled by the author.

However, it is important to understand that the clear methodology of the ensuring the economic security for the supply chain functioning in the organization (enterprise) does not exist. Certainly, there are standards that register substantive provisions of the ensuring the economic security, but each organization must constantly monitor not only its position in the markets (its competitors), but also it should be aware of international practice in this area, and, whenever possible, should adopt decisions to ensure economic security of the supply chain, which will be the most adapted for the organization (enterprise).

Thus, the standard ISO 28000:2007 is the international standard, developed by the International Organization for Standardization (ISO) in reply to the requirement of the global business community to strengthen the security of cargoes, vehicles and objects of the transport infrastructure from threats of terrorism, contraband and plunders. The main objective of this standard consists of strengthening of transport security and of unification of requirements for management systems of security (MSS).

Implementation and certification of management system of supply chains security allows to receive the organization (enterprise) assurance that its supply chain functions in safe conditions, and also to show the evidence of the reached level of security to all interested parties, including potential customers.

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REGIONAL PROBLEMS OF THE KNOWLEDGE ECONOMY DEVELOPMENT IN THE REPUBLIC OF BELARUS

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This article is presented the analysis of the preconditions of becoming the knowledge economy in the regions of the Republic of Belarus with the Knowledge Assessment Methodology developed by World Bank. Here is detected the main problems on the way to becoming the knowledge economy in the regions of the Republic of Belarus and proposed solutions of these problems.

At the moment, the economy of the Republic of Belarus is on the transformation period, the economy system of the country is being restructured. And now it is important to formulate the model that national economy should become. Note that the Republic of Belarus has no significant natural resource potential to compete with foreign countries in the world. At the same time, according to experts, it has a significant employment potential. Thus, the country's economy should be used the business model, which could realize this potential to the fullest. As such the model can be the knowledge economy.