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**STUDY OF THE STATUS OF ISSUES ON IMPLEMENTATION OF TR CU
018/2011 «ON THE SAFETY OF WHEELED VEHICLES»**

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Today, the car is the most common type of vehicle. If only recently, literally 10-20 years ago, the roads of large cities were wide and free, now the motorist has to stand in a traffic jam at certain rush hours to get to the destination. Nevertheless, every day the number of cars is growing, and manufacturers are now and then trying to introduce new technologies that turn a familiar car into a smart gadget that can think and act independently in a given situation. The automotive industry has a high impact on the development and production of products in related industries, having a

significant multiplier effect on the manufacturing sectors of the economy. A passenger car consists of more than 20 thousand components that are manufactured at enterprises related to various industries (metallurgy, chemical, textile and electronic industries, metalworking and others). Thus, the direct coefficient of influence of the automotive industry is 2.5, which means that investments in the automotive industry in the amount of 417 tenge entail an increase in production in related industries by 1042 tenge. According to this indicator, the automotive industry has one of the highest coefficients of influence.

With the formation of the Customs Union, products manufactured on the territory of the country must meet safety requirements, which will be confirmed in the participating countries. After the creation of the union, one of the main tasks was the development of uniform standards and technical regulations based on the WTO rules, and the adoption on this basis of uniform rules for the technical regulation of products, including its certification and declaration. Achieving the unity of the technical regulation system is a very long and complex process that continues to this day.

Transport of the Republic of Kazakhstan plays a significant role in the development of the economy and ensuring the life of the state. One of the most important criteria for the quality of transport services is the safety of the transportation process. This quality is ensured by the use of reliable and safe technology, the use of management, transportation, information technologies, the development of transport infrastructure, and the provision of this field of activity with qualified personnel.

State regulation in the field of road transport is based on the development of rules for the relationship between participants in the transport services market and state requirements for the quality of goods and services, control and supervision of their implementation, implementation of mechanisms to ensure the inevitability of punishment for violations, to prevent the admission of low-quality products and services to the market. These mechanisms primarily include the mechanisms for licensing transportation activities and certification of vehicles, which are in constant development.

Analysis of the current state of the industry revealed a number of key problems in almost all system tools that hinder the introduction of innovations and affect the competitiveness of our products. The main of which is the metrological support of the industry of regulation of vehicle safety. This is the failure to test all safety indicators established in the TR CU, and insufficient equipment of testing laboratories, a lack of experts and the problem of pricing for certification services.

In view of the weak domestic test base and in order to reduce dependence on the Russian test base, it is necessary to adopt mechanisms for the recognition of foreign test protocols and certificates of conformity, sectoral government bodies need to make specific proposals for the expansion and modernization of departmental laboratories at the expense of the republican budget, as well as provide for measures of state support for private laboratories when purchasing test equipment and measuring instruments.

In such an area as transport safety, where the reliability of measurement results is of paramount importance, it is necessary to equip the metrological base of the republic with measuring equipment, standards, test and measurement methods in accordance with the needs of industry and economy.

The advent of powerful computers and software allowed designers and metrologists to gradually move from analytical methods of strength calculation, in which the elements of the power structure (frame) of a bus were presented in the form of separate simplified calculation schemes, to the analysis of the stress-strain state of the bus structure as a whole through the use of the finite element method in a nonlinear staging.

Carrying out full-scale bus rollover tests is usually associated with high material costs. In this regard, at present, computational methods play a significant role in the assessment of passive safety, which make it possible to implement reliable virtual modeling of emergency loading conditions for body structures

One of the most important factors determining the competitiveness of products in world markets is their compliance with standards and technical regulations adopted by the relevant international and regional organizations.

The degree of elaboration of this problem in the republic is at the initial stage. Despite the successes achieved, certification tests of a full-scale structure in the Republic of Kazakhstan, and everything connected with them:

- study of the stress-strain structure
- analysis and presentation of information;
- monitoring the design of the bus during the life cycle

is a laborious task and requires constant optimization and improvement of research methods and tools, due to the emergence of new capabilities of modern technology and changes in the requirements for the characteristics of the safety indicators of motor vehicles.

The aim of the work is to study some problems of the implementation of TR CU 018/2011 "On the safety of wheeled vehicles" in the Republic of Kazakhstan and develop recommendations for their solution.

To achieve this goal, it is necessary to study the following tasks:

- to consider the general provisions of the technical regulation 018/2011 and its distinctive features from the current technical regulations of the Republic of Kazakhstan;
- research the current state of the automotive industry;
- to characterize the main problems of the implementation of TR CU 018/2011 and its features;
- to substantiate the need to use computer modeling as a method for assessing the passive safety of buses based on the results of calculations of bodies and tests of their sections;
- to reproduce the assessment of the passive safety of buses based on the results of calculations of bodies and tests of their sections.

Unification tendencies are inherent in the global economy. Otherwise, there would not have been so many associations like the Customs Union. The purpose of the formation of the Customs Union was to create favorable conditions for increasing the turnover of products in the republics of the former Soviet Union - the republics of Belarus, Kazakhstan and the Russian Federation. One of the tasks of creating the Customs Union was the development of uniform standards and technical regulations based on the WTO rules, and the adoption on this basis of uniform rules for the technical regulation of products, including its certification and declaration.

In order to improve the quality of exported products to the level of world analogues, increase the attractiveness of domestic products abroad, it is planned to introduce technological regulations, develop and implement state standards in accordance with international requirements.

The relevant state bodies of the Republic of Kazakhstan will pursue an active policy to support the interests of domestic manufacturers in the development of technical regulations within the framework of the Customs Union.

TR CU 018/2011 was developed to ensure the safety level of wheeled vehicles, as well as the fulfillment by the CU member states of their obligations arising from participation in international agreements in the field of the safety of wheeled vehicles.

The requirements of TR CU 018/2011 are harmonized with the requirements of the UNECE Regulations adopted on the basis of «Agreements on the Adoption of Uniform Technical Requirements for Wheeled Vehicles, Items of Equipment and Parts That May Be Fitted and / or Used on Wheeled Vehicles, and on the Conditions for the Mutual Recognition of Approvals Based on These Requirements», prisoner in Geneva on March 20, 1958.; Global Technical Regulations adopted on the basis of the "Agreement establishing a Global Technical Regulation for Wheeled Vehicles, Items of Equipment and Parts That May Be Fitted or Used on Wheeled Vehicles", concluded at Geneva on June 25, 1998. and Regulations adopted on the basis of the "Agreement on the Adoption of Uniform Conditions for Periodic Technical Inspections of Wheeled Vehicles and on the Mutual Recognition of Such Inspections", concluded at Vienna on November 13, 1997.

TR CU 018/2011 establishes requirements for wheeled vehicles of the categories: motor vehicles (in accordance with the international classification - L); vehicles with at least four wheels and used for the carriage of passengers (M); wheeled vehicles used for the transport of goods (N); trailers for wheeled vehicles (O).

The CU TR defines the rules for circulation on the market or putting into operation of wheeled vehicles, formulates safety requirements, as well as procedures for assessing conformity to the wheeled vehicles put into circulation and in operation.

For the purpose of a unified interpretation in the TR, about 140 terms have been carried out, ensuring their uniform understanding and use.

The scientific novelty of this work lies in the fact that the results obtained in it allow:

- introduce into practice the methods of virtual modeling in the Republic of Kazakhstan;
- to implement modern hardware capabilities and methodological developments in the production of field tests of transport facilities.

References

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